# CHAPTER 18

# REGULATIONS GOVERNING THE CERTIFICATION OF LABORATORIES AND ENVIRONMENTAL MEASUREMENTS

**Authority**

N.J.S.A. 13:1E–1 et seq., 13:1K–6 et seq., 26:2D–70 et seq., 58:10–23.11 et seq., 58:10A–1 et seq. and 58:12A–1 et seq.

**Source and Effective Date**

R.2001 d.224, effective June 11, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).

**Executive Order No. 66(1978) Expiration Date**

Chapter 18, Regulations Governing the Certification of Laboratories and Environmental Measurements, expires on June 11, 2006.

**Chapter Historical Note**

Chapter 18, Regulations Governing Laboratory Certification and Standards of Performance, was adopted as R.1981 d.279, effective August 6, 1981. See: 13 N.J.R. 260(d), 13 N.J.R. 481(c).

Pursuant to Executive Order No. 66(1978), Chapter 18, Regulations Governing Laboratory Certification and Standards of Performance, was readopted as R.1986 d.351, effective August 6, 1986. See: 18 N.J.R. 1239(b), 18 N.J.R. 1797(b).

Pursuant to Executive Order No. 66(1978), Chapter 18, Regulations Governing Laboratory Certification and Standards of Performance, was readopted as R.1991 d.385, effective July 3, 1991. See: 23 N.J.R. 1109(a), 23 N.J.R. 2346(c).

Chapter 18, Regulations Governing Laboratory Certification and Standards of Performance, was repealed and a new Chapter 18, Regulations Governing the Certification of Laboratories and Environmental Measurements, was adopted by R.1996 d.307, effective July 1, 1996. See: 27 N.J.R. 4761(a), 28 N.J.R. 3330(c).

Pursuant to Executive Order No. 66(1978), Chapter 18, Regulations Governing the Certification of Laboratories and Environmental Measurements, was readopted as R.2001 d.224, effective June 11, 2001. See: Source and Effective Date. See, also, section annotations.

**CHAPTER TABLE OF CONTENTS**

## SUBCHAPTER 1. GENERAL PROVISIONS

### 7:18–1.1 Scope and authority

(a) This chapter constitutes the Department's regulations governing certification of laboratories performing sample analyses for compliance with any of the statutes listed in (c) below, with any regulations or orders issued pursuant to those statutes, or with the Contract Laboratory Program.

(b) This chapter establishes the procedures for obtaining and maintaining certifications, and the criteria and procedures that certified environmental laboratories shall follow in handling, preserving, and analyzing regulatory samples, and in collecting samples for acute toxicity testing.

(c) This chapter is adopted pursuant to the following statutes:

1. The Safe Drinking Water Act, N.J.S.A. 58:12A–1 et seq.;

2. The Water Pollution Control Act, N.J.S.A. 58:10A–1 et seq.;

3. The portion of the Radiation Protection Act governing radon and radon progeny, N.J.S.A. 26:2D–70 et seq.;

4. The Solid Waste Management Act, N.J.S.A. 13:1E–1 et seq.;

5. The Industrial Site Recovery Act, N.J.S.A. 13:1K–6 et seq.; and

6. The Spill Compensation and Control Act, N.J.S.A. 58:10–23.11 et seq.

### 7:18–1.2 Construction

These rules shall be liberally construed to permit the Department to discharge its statutory functions and to effectuate the purposes of the laboratory certification program.

### 7:18–1.3 Purposes of the regulations

(a) This chapter is promulgated for the following purposes:

1. To establish a certification program for laboratories performing environmental analyses, and to confine a laboratory's scope of certification to the specific parameters, techniques, method references, and corresponding approved methods as shown on the certified environmental laboratory's annual certified parameter list;

2. To establish the administrative procedures to be followed by certified environmental laboratories, and by laboratories seeking to become certified environmental laboratories;

3. To require that certification status be contingent upon continued compliance with the standards of performance set forth herein, including, but not limited to, standards pertaining to facility conditions, equipment and supplies, personnel, quality assurance and quality control, data reporting and data maintenance; and

4. To establish the enforcement procedures that the Department shall follow to ensure that a certified environmental laboratory is in compliance with this chapter.

(b) Compliance with this chapter will assist a laboratory in meeting the data quality requirements of State regulatory programs with regard to accuracy, precision, completeness, comparability, and representativeness. These rules regulate sample collection (acute toxicity testing only), handling, preservation, and analysis. The laboratory shall produce data with known quality assurance and quality control procedures, and in accordance with approved techniques and reference methods.

### 7:18–1.4 Certification program requirements

(a) A laboratory may request certification in the New Jersey Environmental Laboratory Certification Program (NJ–ELCP) pursuant to N.J.A.C. 7:18 or in the New Jersey National Environmental Laboratory Accreditation Program (NJ–NELAP) pursuant to the National Environmental Laboratory Accreditation Conference (NELAC) standards, incorporated herein by reference at N.J.A.C. 7:18–1.5(d).

1. A laboratory shall not apply for or maintain simultaneous certification in the NJ–ELCP and NJ–NELAC.

2. A laboratory which has obtained NJ–NELAP certification shall comply with all sampling, enforcement, and data submittal requirements as established by N.J.A.C. 7:18 pursuant to the statutes specified at N.J.A.C. 7:18–1.1(c).

(b) A laboratory that analyzes samples for the purpose of establishing compliance with any regulatory program shall obtain and maintain certification as a certified environmental laboratory in accordance with this chapter. An analysis performed by a laboratory that is not a certified environmental laboratory does not establish compliance with any regulatory program.

(c) When analyzing regulatory samples, a certified environmental laboratory shall perform only those methods for which it has received certification or has received approval to use as alternate test procedures (ATPs) pursuant to N.J.A.C. 7:18–2.20. The certified environmental laboratory shall analyze only those parameters that are included in a valid annual certified parameter list (ACPL) issued pursuant to N.J.A.C. 7:18–2.6(b).

(d) The Department–Sanctioned Analytical Methods (DSAMs) are the methods approved for use by certified environmental laboratories. The designation of a method as a DSAM is described in N.J.A.C. 7:18–2.21.

(e) Under N.J.A.C. 7:18–2.6(b), a certified environmental laboratory will receive a certificate and an Annual Certified Parameter List (ACPL) from the Department. The certified environmental laboratory shall conspicuously display these documents in a location on its premises visible to the public.

Amended by R.2001 d.277, effective August 6, 2001.
See: 33 N.J.R. 449(a), 33 N.J.R. 2664(a).
Inserted a new (a) and recodified former (a) through (d) as (b) through (e).

### 7:18–1.5 Incorporation by reference

(a) The following regulations promulgated by the USEPA, together with all amendments and supplements, are incorporated by reference into this chapter:

1. The "National Primary and Secondary Drinking Water Regulations," 40 CFR 141 and 40 CFR 143;

2. The "Guidelines Establishing Test Procedures for the Analysis of Pollutants," 40 CFR 136; and

3. The methods listed in Subchapter I, Solid Waste, 40 CFR 260, 261.

(b) All existing CERCLA CLP methods, and all future new or modified CERCLA CLP methods, are incorporated by reference into this chapter. CERCLA CLP methods are available from: EPA Contract Laboratory Program, Sample Management Office, P.O. Box 815, Alexandria, VA 22313. All new or modified methods are incorporated when Invitation for Bid (Bid) documents containing these methods are published in the Commerce Business Daily. The Commerce Business Daily is available from U.S. Department of Commerce, Washington, DC 20230, (202) 783–3238.

(c) The Department's analytical methods for sludge analysis at N.J.A.C. 7:14C, together with all amendments and supplements, are incorporated by reference into this chapter.

(d) The National Environmental Laboratory Accreditation Conference (NELAC) Standards (EPA600/R–99/068), Chapters 1 through 5, July 1, 1999, together with amendments and supplements thereto, are incorporated by reference into this chapter. Copies of the NELAC standards are available on the NELAC internet site at http://www.epa.gov/ttn/nelac. Copies of the NELAC Standards may also be purchased from the USEPA, Office of Research and Development, 3210 Triangle Park, NC 27711, (919) 541–1120.

Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).
In (c), amended N.J.A.C. reference.
Amended by R.2001 d.277, effective August 6, 2001.
See: 33 N.J.R. 449(a), 33 N.J.R. 2664(a).
Added (d).

### 7:18–1.6 Program information; notices; submittals

(a) Unless otherwise specified, any questions concerning the requirements of this chapter should be directed to the Department's Office of Quality Assurance at (609) 292–3950. Written inquiries can be directed to the following address:

New Jersey Department of Environmental Protection
Office of Quality Assurance
PO Box 424
Trenton, NJ 08625–0424

(b) Unless otherwise specified, any submittals of PE sample results, submittals of documents, notices of other communications required to be made to the Department under this chapter shall be made to the address specified in (a) above. Applications for certification and for renewals and modifications of certifications shall be submitted to the address specified in (a) above.

Administrative change.
See: 28 N.J.R. 4098(a).
Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).

### 7:18–1.7 Definitions

The following words and terms, when used in this chapter, shall have the following meanings. If a definition in this section differs from the corresponding definition in any regulation or other document incorporated by reference under N.J.A.C. 7:18–1.5, the definition in the document incorporated by reference shall control.

"Acceptably analyze" means to analyze a sample in a manner that satisfies the requirements of N.J.A.C. 7:18–2.13(j).

"Acclimation" means, for acute toxicity testing, an organism's physiological adjustment to environmental changes including, but not limited to, changes in temperature and salinity.

"Accreditation" means the process by which an agency or organization evaluates and recognizes a laboratory as meeting certain predetermined qualifications or standards, thereby accrediting the laboratory. In the context of the National Environmental Laboratory Accreditation Program (NELAP), this process is a voluntary one.

"Accredited" means having the approval conferred upon schools, institutions, or programs where appropriate by a nationally recognized regional accrediting agency or association as determined by either the United States Secretary of Education, State Commissioner of Education, or State Chancellor of Higher Education.

"Accrediting authority" means the territorial, state or Federal agency having responsibility and accountability for environmental laboratory accreditation and which grants accreditation.

"ACPL" means Annual Certified Parameter List and is a list that is sent annually to a certified environmental laboratory showing the regulatory programs, analytical techniques, method references and corresponding methods, specific parameters or group thereof for which the laboratory is certified to analyze regulatory samples.

"Acute MCL violation" means any violation of the maximum contaminant level (MCL) for any parameter specified by the State as posing an acute risk to human health including the presence of fecal coliform or E. coli, and nitrate (>10mg/L), nitrite (>one mg/L) or nitrate/nitrite (>10mg/L).

"Acute toxicity" means, for acute toxicity testing, a lethal or adverse sublethal effect to an organism exposed to a toxic substance for no more than 96 hours.

"Acute toxicity testing" means the standardized procedures for determining the quantitative lethal or sublethal effects of a toxic substance on an organism.

"Affiliate" means, with respect to any individual or entity, another individual or entity who has a controlling interest in such individual or entity; in whom such individual or entity has a controlling interest; or who is under common control with such individual or entity.

"Alternate Test Procedure (ATP)" means a procedure that:

1. Contains modifications not permitted in a method listed as a DSAM; or

2. Is a method not listed as a DSAM for the monitoring of one or more parameters of interest for the Safe Drinking Water Act, New Jersey Pollutant Discharge Elimination System, New Jersey Spill Compensation Act, New Jersey Solid Waste Management Act, Industrial Site Recovery Act, and New Jersey Underground Storage Tanks Program.

"Analytical reagent (AR) grade," "ACS reagent grade" and "reagent grade" mean reagents that conform to the current specifications of the Committee on Analytical Reagents of the American Chemical Society.

"Analyze-immediately parameter" means a parameter for which analysis must be performed within 15 minutes after the sample is collected. Examples of analyze-immediately parameters include chlorine dioxide, dissolved oxygen with probe, pH, ozone, residual chlorine, sulfite and temperature.

"ANSP—Goulden" means, for Acute Toxicity Testing, the publication entitled "Daphnia Bioassay Workshop," Dr. Clyde Goulden and Ms. Linda Henry; The Academy of Natural Sciences of Philadelphia, Division of Limnology and Ecology. This reference is a source for daphnid culturing and testing techniques used in N.J.A.C. 7:18–7, Acute Toxicity Testing.

"Applicant" means a laboratory applying to the Department to become a certified environmental laboratory.

"Arochlor" or "Aroclor" means the trade name for a series of commercial polychlorinated biphenyl and terphenyl mixtures, often termed PCBs or polychlorinated biphenyls.

"ASTM D1193–91" means, for chemical testing, "Standard Specifications for Reagent Water," D1193–91 (and later revisions), American Society for Testing and Materials.

"ASTM D 4229–84" means, for acute toxicity testing, "Standard Practice for Conducting Static Acute Toxicity Tests on Waste-waters with Daphnia," D 4229–84, American Society for Testing and Materials. This reference method is a source for daphnid culturing and testing techniques used in N.J.A.C. 7:18–7, Acute Toxicity Testing.

"ASTM E 724–80" means, for acute toxicity testing, "Standard Practice for Conducting Static Acute Toxicity Tests with Larvae of Four Species of Bivalve Molluscs," E 724–80; American Society for Testing and Materials. This reference method is a source for standardized culturing and testing techniques in subchapter 7, Acute Toxicity Testing.

"ASTM E 729–80" means, for acute toxicity testing, "Standard Practice for Conducting Acute Toxicity Tests With Fishes, Macroinvertebrates, and Amphibians," E 729–80, American Society for Testing and Materials. This reference method is a source for standardized culturing and testing techniques in subchapter 7, Acute Toxicity Testing.

"ASTM–31" means Annual Book of the American Society for Testing and Materials, Part 31.

"Asymptotic $LC_{50}$" means, for acute toxicity testing, the toxicant concentration at which the $LC_{50}$, the lethal concentration at which 50 percent death of the test organisms occurs during an acute toxicity test, becomes a constant for a prolonged exposure time.

"Authorized measurement protocols" for radon/radon progeny-in-air means the DSAMs for Category RA1, radon/radon progeny-in-air, which are the approved methods for use by a certified laboratory when performing radon/radon progeny-in-air analysis. These DSAMs include the "Indoor Radon and Radon Decay Product Measurement Device Protocols," USEPA 402–R–92–004 and the "Interim Protocols for Screening and Follow-up Radon and Radon/Decay Product Measurements," USEPA 520/l–86–014.

"Authorized proficiency program" or "APP" means the USEPA Radon/Radon Progeny Measurement Proficiency Program, Eastern Environmental Radiation Facility, Montgomery, Alabama 36109, or other program authorized by the Department in writing as being equally stringent. The APP provides the Department with a laboratory's radon/radon progeny results of PE samples. The Department uses the laboratory's results and the expected acceptable limits to partially assess its analytical performance. Pursuant to N.J.A.C. 7:18–2.13, successful analysis of radon/radon progeny PE samples is necessary for obtaining and maintaining radon/radon progeny-in-air certification.

"Bioassay" means, for acute toxicity testing, a determination of the concentration or dose of a given material necessary to cause a specific response in a test organism under stated conditions. Bioassay refers to an acute toxicity test.

"Biomonitoring" means, for acute toxicity testing, all test methods that utilize a biological system, or any of its parts, to assess the presence or effects of one or more pollutants and/or environmental factors, either alone or in combination.

"Bureau" means one of the management units of the Department.

"Category" means one of the assigned designations that includes groups of parameters, their techniques of analysis, method references, and corresponding approved methods, for which certification is offered.

"CERCLA (CLP) Program" or "Contract Laboratory Program" means the USEPA contract program for the procurement of analytical data in support of its CERCLA program and the seven Categories for which a laboratory may obtain certification from the Department for its CERCLA programs.

"Certification" means a laboratory's status as a certified environmental laboratory, or the document issued by the Department pursuant to N.J.A.C. 7:18–2.6, evidencing that status.

"Certification of Radon Testers and Mitigators" means N.J.A.C. 7:28–27.

"Certification year" means a one-year period beginning on July 1 of one year and ending on June 30 of the following year. A particular certification year is identified by the calendar year in which it ends. For example, certification year 1996 is the certification year ending on June 30, 1996.

"Certified environmental laboratory" means any laboratory, facility, consulting firm, government or private agency, business entity or other person that the Department has authorized pursuant to this chapter to perform analysis in accordance with the procedures of a given analytical method using a particular technique as set forth in a certain methods reference document, and to report the results from the analysis of environmental samples in compliance with a Departmental regulatory program.

"Certified radon environmental laboratory" means a radiochemical environmental laboratory that the Department has certified pursuant to this chapter to analyze samples for the presence of radon and/or radon progeny-in-air in a facility separate from the location in which the sample was taken, and that uses stationary measurement detection equipment.

"Certified radon measurement business" means a commercial business enterprise certified pursuant to N.J.A.C. 7:28–27 to sell devices and/or test for radon/radon progeny-in-air.

"Certified radon measurement specialist" means an individual certified pursuant to N.J.A.C. 7:28–27 to perform and/or evaluate radon/radon progeny-in-air measurements for a certified radon measurement business.

"Certified radon measurement technician" means an individual certified pursuant to N.J.A.C. 7:28–27 to perform radon/radon progeny-in-air measurement activities.

"Certified thermometer" means a thermometer that has documentation from the manufacturer showing that it has been calibrated against a National Institute of Standards and Technology (NIST), formerly National Bureau of Standards (NBS), thermometer for the temperature ranges employed by the environmental laboratory and the correction factors from that comparison.

"Chemical testing" means the chemical analysis and physical testing of environmental samples for inorganic and organic parameters and physical properties.

"Chronic toxicity" means, for acute toxicity testing, death or other adverse impacts that affect the growth, survival, or reproductive success of an organism or its progeny after a relatively long exposure period to toxic substances. Chronic toxicity is measured using intermediate-term or long-term bioassays.

"Class 'A' glassware" means glassware satisfying the applicable requirements for Class "A" glassware established by the National Institute of Standards and Technology (formerly the National Bureau of Standards).

"Client" means the person who requests an analysis from a laboratory.

"Cold-water fishes" means, for acute toxicity testing, those species of fish living and breeding in aquatic ecosystems with a maximum water temperature between 10 degrees Celsius and 16 degrees Celsius.

"Collector" means the person who collects a sample.

"Compliance analysis" means the analysis of a sample that is required by law, or by Departmental regulation or order.

"Composite sample" means a sample composed of several discrete samples combined in a known proportion. For NJPDES wastewater monitoring, a composite sample is a sample composed of several discrete samples collected at equal time intervals, or proportionally to the flow rate of the discharge.

"Confluent growth" means a bacterial growth that covers the entire filtration area of the filter with no discrete colonies when performing microbiological analysis by the membrane-filter techniques listed in Categories DW1, WP1, and SHW1. When confluent growth occurs, another sample must be obtained and analyzed using higher dilutions for the membrane-filter technique or using another approved technique.

"Contaminant or grouped-contaminants" means a specific analyte or group of analytes which are included in the general term "parameter" for the purposes of this chapter.

"Control" means, for acute toxicity testing, the group of test organisms in a chamber under test conditions that are exposed to dilution water only and/or the natural water to which they are normally exposed.

"Controlling interest" means any of the following:

1. The direct or indirect beneficial ownership, by the person asserted to have a controlling interest and any of such person's affiliates, of at least 50 percent of the voting stock or other equity interest in a person;

2. The holding of any direct or indirect beneficial interest in at least 50 percent of the income or profits of a person, by the person asserted to have a controlling interest; or

3. The existence of any other relationship between the person asserted to have a controlling interest and the person controlled, which relationship in fact constitutes control over the affairs of the person controlled.

"Criteria—1986" means, for acute toxicity testing, "Quality Criteria for Water 1986," USEPA, Office of Water Regulations and Standards, Washington, D.C., USEPA 440/5–86–001. This reference was used to establish purity guidelines for test organism culture water in subchapter 7, Acute Toxicity Testing.

"Custodian" means an individual, designated by the laboratory manager, trained in the proper procedures to receive samples into the environmental laboratory.

"Definitive test" means, for acute toxicity testing, a short-term toxicity test used to measure the acute toxicity of effluents or materials.

"Department" means the New Jersey Department of Environmental Protection.

"Department validated methods" means analytical methods developed and validated for analysis of specified matrices by the Department or by Department sponsored research.

"Detection limit" (DL) or "instrument detection limit" (IDL) means the lowest concentration above background noise level that an instrument can detect reliably.

"Dilution factor" (DF) means, for chemical testing, a multiplication factor applied to a calculated sample result to compensate for sample dilution. The dilution factor is determined as follows:

DF = Diluted sample volume/Original sample volume

"Dilution water" means, for acute toxicity testing, unpolluted water of desired quality to be used in preparing the different test concentrations of the effluent and controls. For example, dilution water is usually collected from a point that is as close as possible to, but upstream or outside of, the effluent's zone of impact.

"Discharge" means an intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying, or dumping of a pollutant into the waters of the State, onto land or onto wells from which the pollutant might flow or drain into such waters, or into waters, or onto lands outside the jurisdiction of the State which pollutant enters the waters of the State, and shall include the release of any pollutant into a municipal treatment works.

"Drinking Water Program" means the Department's program implementing the Safe Drinking Water Act, N.J.S.A. 58:12A–1 et seq.

"Drinking water sample" means a regulatory sample analyzed to determine compliance with the Drinking Water Program.

"DSAM" means Department Sanctioned Analytical Method. DSAMs are methods that laboratories may be certified to perform if they qualify under the requirements of this chapter. Mandatory methods, published or referenced in the Code of Federal Regulations, become DSAMs on their stated effective date. New or revised CERCLA CLP methods become DSAMs when new or revised CLP methods are included in Invitation for Bid documents published in the Commerce Business Daily. DSMs that are needed for analysis of Department program regulatory samples, are designated as DSAMs by procedures described at N.J.A.C. 7:18–2.21.

"DSM" means Department Selected Method. DSMs are methods selected for designation as DSAMs. DSMs include methods that the Department has determined are necessary for the analysis of Program regulatory samples, but are not mandatory methods published or referenced in the Code of Federal Regulations and are not new CERCLA CLP methods published in Invitation for Bid documents published in the Commerce Business Daily. DSMs may include:

1. Published USEPA discretionary methods;

2. Methods published by professional organizations with recognized expertise in method development such as ASTM, APHA, and USGS; and

3. Departmental validated methods.

"$EC_{50}$" means, for acute toxicity testing, the statistical estimate of the toxicant concentration that has a specified adverse effect (such as immobilization, change in respiration rate, or loss of equilibrium) on 50 percent of test organisms after a specific time of exposure.

"EDL" means an electrodeless discharge lamp used in atomic absorption spectroscopy.

"Effective concentration (EC)" means, for acute toxicity testing, the statistical estimate of the toxicant concentration that has a specified adverse effect (such as immobilization, change in respiration rate, or loss of equilibrium) in a given time.

"Effluent" means the outflow from a point source.

"EPA Acute Methods #013–1985" means, for acute toxicity testing, "Methods for Measuring The Acute Toxicity of Effluents to Freshwater and Marine Organisms," 3rd ed, USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268, USEPA–600–4–85–013.

"EPA Acute Methods #027F–1993" means, for Acute Toxicity Testing, Methods for Measuring The Acute Toxicity of Effluents for Freshwater and Marine Organisms, 4th ed., USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268, EPA–600/4–90/027F.

"EPA Microbiological Methods" means, for microbiological testing, "Microbiological Methods for Monitoring the Environment," USEPA–600/8–78–017.

"Exposure time" means, for acute toxicity testing, the time of exposure of test organisms to a test solution for parameters in the Acute Toxicity Testing Category.

"Field of testing" means NELAC's approach to accrediting laboratories by program, method and analyte. Laboratories requesting accreditation for a program-method-analyte combination or for an up-dated/improved method are required to submit only that portion of the accreditation process not previously addressed.

"Field analyses" means those measurements taken directly at the site being sampled using portable meters or other portable instrumentation.

"Flow-through bioassay" means, for acute toxicity testing, a test in which the solution is replaced continuously in the test chambers for the test duration.

"GC" means gas chromatography.

"Grab sample" means an individual sample collected over a time period of less than 15 minutes.

"Guidelines Establishing Test Procedures for the Analysis of Pollutants" means the regulations promulgated by the USEPA at 40 CFR 136, together with all amendments and supplements.

"HASL 1973" means "HASL, Procedure Manual," edited by John H. Harley. HASL 300, ERDA Health and Safety Laboratory, New York, NY, 1973. Pursuant to N.J.A.C. 7:18–6, a certified laboratory performing analysis of the Department's additional radiochemical and radionuclide parameters not listed in the Safe Drinking Water Act must reference HASL 1973.

"Hazardous Waste Management System: General" means the regulations promulgated by the USEPA at 40 CFR 260, together with all amendments and supplements.

"HYICP" or "Hydride Generation Inductively Coupled Plasma—Atomic Emission Spectroscopy," is an inductively coupled plasma technique employing sodium borohydride ($NaBH_4$) and iodine to produce volatile hydrides of antimony, arsenic, and selenium for low-concentration aqueous samples.

"ICP/MS" means Inductively Coupled Plasma/Mass Spectrometry.

"Identification and Listing of Hazardous Waste" means the regulations promulgated by the USEPA at 40 CFR 261, together with all amendments and supplements.

"Incipient $LC_{50}$" means, for acute toxicity testing, "Asymptotic $LC_{50}$".

"Indicator parameter" is a parameter that is identified in a proficiency test and is used to evaluate the overall analytical performance of a laboratory on that specific method. Pursuant to N.J.A.C. 7:18–2.13, the Department uses a laboratory's performance on analyzing an indicator parameter to determine the laboratory's certification status on all parameters covered by that analytical method.

"Juvenile" means, for acute toxicity testing, the fishes that are greater than 20 days but less than or equal to 60 days post hatch.

"Laboratory" means any individual or other entity, including without limitation, corporations, associations, partnerships, joint ventures, and the United States, any state, any foreign country or government, and any political subdivision or agency thereof, that performs analyses of samples.

"Laboratory grade water" means a supply of water meeting or exceeding the specifications given in N.J.A.C. 7:18–7.4(b), to be used for the holding, spawning, and rearing of aquatic organisms used in toxicity testing.

"Laboratory pure water" means distilled, deionized, or charcoal treated water that meets the requirements of:

1. N.J.A.C. 7:18–4.5(e), for microbiological testing;
2. N.J.A.C. 7:18–6.2, for radiochemical testing; or
3. N.J.A.C. 7:18–7.4, for acute toxicity testing.

"Larvae" means, for acute toxicity testing, the fishes that are less than or equal to 20 days post hatch.

"Lethal concentration (LC)" means, for acute toxicity testing, the statistical estimate of the toxicant concentration producing death of the test organisms. LC is usually defined as the median (50 percent) lethal concentration, $LC_{50}$, i.e. concentration killing 50 percent of tested organisms at a specific time of exposure, for example 96–hour $LC_{50}$.

"$LC_{50}$" means, for acute toxicity testing, the lethal concentration at which 50 percent of tested organisms are killed over a specific time of exposure.

"LC Method" means Lucas Cell Method, USEPA/600/2–87/082, March 1989, a DSAM for the analysis of radon in drinking water samples.

"LS Method" means Liquid Scintillation Method, USEPA/600/28761082, March 1989, a DSAM for the analysis of radon in drinking water samples.

"Macro analysis" means the determination of parameters at concentrations in the high part per million or percent range.

"Manual" means "Manual for the Certification of Laboratories Analyzing Drinking Water, Criteria and Procedures Quality Assurance," USEPA/570/9–90/008, USEPA, Office of Water (WH–550D), Washington, DC 20460, as updated or supplemented. This reference is the Federal training and standard operating procedures manual for Federal, state, and local certification officers of drinking water laboratories for microbiological, chemical, and radiochemical testing.

"Maximum contaminant level (MCL)" means the maximum permissible level of a contaminant allowed in drinking water under the National Primary Drinking Water Regulations.

"Membrane filtration (MF) method" means a method for determining the bacterial count in a water sample. In this method, a known volume of water is filtered through a membrane filter of optimum pore size for full bacterial retention. The filter is incubated in contact with culture medium to provide nutrients for bacterial growth. After incubation at a prescribed time and temperature, the cultures are examined for bacterial colonies that are counted and recorded per 100 mL of water sample.

"Method detection limit" (MDL) means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte according to the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR 136, Appendix B.

"Method reference" means the name, abbreviation or acronym (for example, USEPA, ASTM, USGS) of the organization that has developed an approved method or of the publication containing an approved method. The method reference, together with the method number, specifically identifies a method.

"Methods for Measuring Acute Toxicity—EPA" means "Methods for Measuring Acute Toxicity of Effluents to Aquatic Organisms," USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, EPA–600/4–78–012.

"Micro analysis" means the determination of trace quantities of parameters at concentrations in the low and sub part per million range.

"Modified static toxicity test" means, for acute toxicity testing, the "Renewal Toxicity Test."

"Most probable number (MPN)" means a quantitative designation of microbial population which is determined by a statistical method. In this method, a multiple dilution tube technique is used with a standard culture medium. The tubes are incubated and observed for gas production. Results of these tubes are translated by mathematical probability tables into population numbers.

"MS" means mass spectrometry.

"mv" means millivolt or $\frac{1}{1000}$ of a volt.

"National Environmental Laboratory Accreditation Conference (NELAC)" means a voluntary organization of state and Federal environmental officials and interest groups purposed primarily to establish mutually acceptable standards for accrediting environmental laboratories.

"National Environmental Laboratory Accreditation Program (NELAP)" means the overall National Environmental Laboratory Accreditation Program of which NELAC is a part.

"National Primary Drinking Water Regulations" means the regulations promulgated by the USEPA at 40 CFR 141, together with all amendments and supplements.

"National Secondary Drinking Water Regulations" means the regulations promulgated by the USEPA at 40 CFR 143, together with all amendments and supplements.

"NELAC recognition" means the determination by the NELAP Director that an accrediting authority meets the requirements of the NELAP and is authorized to grant NELAP accreditation to laboratories.

"NELAC standards" means the plan of procedures for consistently evaluating and documenting the ability of laboratories performing environmental measurements to meet nationally defined standards established by the National Environmental Laboratory Accreditation Conference.

"New Jersey Pollutant Discharge Elimination System rules" or "NJPDES rules" means the rules promulgated by the Department at N.J.A.C. 7:l4A, together with all amendments and supplements. The NJPDES rules govern the Department's system for issuing, modifying, suspending, revoking and reissuing, terminating, monitoring, and enforcing discharge permits pursuant to the New Jersey Water Pollution Control Act.

"New Jersey Safe Drinking Water Act Regulations" means the regulations promulgated by the Department at N.J.A.C. 7:10, together with all amendments and supplements. The rules implement the New Jersey Safe Drinking Water Act, N.J.S.A. 58:12A–1 et seq.

"NIST" means the National Institute of Standards and Technology, formerly known as the National Bureau of Standards.

"NJWPCA" or "New Jersey Water Pollution Control Act" means N.J.S.A. 58:10A–1 et seq., together with all amendments and supplements.

"nm" means nanometer, one millionth of a millimeter, in the Metric System.

"N.M.A.T. (no measurable acute toxicity) definitive toxicity test" means, for acute toxicity testing, a short-term toxicity test designed to measure compliance with NJPDES permit limitations of "no measurable acute toxicity."

"N.O.A.E.C. (no observed adverse effort concentration) definitive toxicity test" means, for acute toxicity testing, a short-term toxicity test designed to measure compliance with NJPDES permit limitations of "no observed adverse effect concentration."

"Non-transient non-community water system" means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.

"Office of Quality Assurance" (OQA) means the office in the New Jersey Department of Environmental Protection that administers the Department Quality Assurance Program, the Environmental Laboratory Certification Program, and the State Contract Laboratory Program which includes the Analytical Services Contracts and Memoranda of Agreements for Analytical Services.

"On-site analyses" means the analysis of samples collected at a facility or a site of environmental concern, performed at that facility or environmental site.

"Parameter" means a general term that includes, but is not limited to, terms such as contaminant, constituent, substance, metal, organic chemical, and characteristics that are used to designate an analyte, group of analytes, attribute, or physical property for which a certified environmental laboratory may be approved to perform analysis of regulatory samples and report results.

"Performance evaluation sample" or "PE sample" means a sample containing a known concentration of one or more specific parameters, used to evaluate the analytical performance of a laboratory. These materials may be provided by the USEPA, the Department, or other Department approved programs.

"Permit" means a NJPDES permit issued pursuant to the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A–6.

"Person" means any individual or other entity, including without limitation, corporations, associations, partnerships, joint ventures, and the United States, any state, any foreign country or government, and any political subdivision or agency thereof.

"pH" means a numerical expression of the hydrogen ion concentration acidity) of aqueous matrices. pH values range from 0 (high acidity-low alkalinity) to 7 (neutral), to 14 (low acidity-high alkalinity).

"Piper–1982" means, for acute toxicity testing, "Fish Hatchery Management," by Piper et al., 1982, U.S. Fish and Wildlife Publication.

"Point source" means any discernible, confined, and discrete conveyance from a mobile or stationary source, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete issue, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, from which pollutants are or may be discharged.

"Pollutant" means any dredge spoil, solid waste, incinerator residue, filter backwash, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, thermal waste, wrecked or discarded equipment, and construction waste or runoff or other residue discharged to the land, groundwaters or surface waters of the state.

"Primary accrediting authority" means the agency or department designated at the territory, state, or Federal levels as the recognized authority with responsibility and accountability for granting NELAC accreditation for a specified field of testing.

"Primary standard" means a very pure reagent of defined purity used as a reference for standardizing other reagent solutions.

"Proficiency study" means an organized program in which laboratories participate in the analysis of PE sample aliquots from homogeneous sample batches. The PE samples contain one or more parameters monitored under a regulatory program, for example, the Drinking Water Program. Data from the study are analyzed statistically, so that the acceptability of individual laboratory results are based on the performance of participating laboratories.

"Public community water system" means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

"Public non-community water system" means a public water system that is not a community water system.

"Quality assurance" or "QA" means the integrated system of operations and measurements performed to assure that data meets defined standards of quality with a stated level of confidence.

"Quality control" or "QC" means the practice of standardized operations or measurements which determine one or more aspects of data quality. An example is the evaluation of precision and accuracy data of an analytical method by statistical methods for the purpose of establishing control limits within which future precision and accuracy data must fall.

"Radon" means the radioactive noble gas radon–222.

"Radon Act" means N.J.S.A. 26:2D–70 et seq.

"Radon progeny-in-air" means the short-lived radionuclides formed as a result of the decay of radon–222. The short-lived radon progeny consist of polonium–218, lead–214, bismuth–214 and polonium–214.

"Radon/Radon Progeny-in-Air Program" means the Department's program implementing the portion of the Radiation Protection Act governing radon and radon progeny, N.J.S.A. 26:2D–70 et seq.

"Range-finding toxicity test" means, for acute toxicity testing, a short-term (usually 24 hours), small-scale test to determine the approximate concentration range to be covered in full-scale definitive testing. This is especially useful with effluents or materials of unknown toxicity.

"Raw data" means the data generated during the sample preparation and analysis. The data includes analyst notebook entries, bench sheets, standards preparation, instrument calibration, method QC, strip chart graphs, computer printouts, and integrator printouts.

"Reagent water" means water used for chemical testing that meets the specifications of Type I (or better) and Type II (or better) reagent waters as defined in the current version of ASTM D1193. Type I reagent water is required for inorganics analysis. Type II reagent water is required for organics analysis and sampling equipment decontamination.

"Reciprocal" means by mutual agreement of two or more states to accept each other's findings regarding the ability of environmental testing laboratories in meeting NELAC standards.

"Recognition" means the determination that an accrediting authority meets the requirements of the NELAP and is authorized to grant NELAP accreditation to laboratories.

"Record" means all information and data recorded and/or stored on paper, microfilm/microfiche or computer systems.

"Regulatory program" means any of the statutes listed in N.J.A.C. 7:18–1.1(c), any regulations or orders issued pursuant to those statutes, or the Contract Laboratory Program.

"Regulatory purposes" means for the purpose of determining compliance with a regulatory program.

"Regulatory sample" means either of the following:

1. A sample taken and/or analyzed to comply with a regulatory program; or

2. A proficiency evaluation (PE) sample.

"Renewal toxicity test" means, for acute toxicity testing, a static test with periodic exposure (at least once every 24 hours) of the test organisms to a fresh test solution of the same concentration. This is accomplished either by transferring the test organisms or replacing the test solution.

"Replicate sample" means a sample prepared by dividing a homogeneous sample into separate parts so that each part is also homogeneous and representative of the original sample.

"Response" means, for acute toxicity testing, the observed biological effect of the material tested. In acute toxicity tests, the observed effect is usually death.

"Safe Drinking Water Act" or "NJSDWA" means N.J.S.A. 58:12A–1 et seq.

"Salinity" means, for acute toxicity testing, the total amount of dissolved salts in sea water expressed in parts per thousand (ppt) by weight when all the carbonate has been converted to oxide, the bromide and iodide have been replaced with chloride, and all organic matter has been completely oxidized.

"Sample handling and preservation" means those sample handling and preservation techniques listed in N.J.A.C. 7:18–9. These techniques comprise the Department's minimum performance requirements for handling and preserving a valid sample for subsequent analysis by a certified environmental laboratory for regulatory purposes.

"Sampling point" means a particular site whose location may be specified in a permit, or otherwise, and from which samples are to be collected for testing and evaluation.

"SM14" or "Standard Methods, 14th Edition" means "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 14th Edition, 1975.

"SM15" or "Standard Methods, 15th Edition" means "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 15th Edition, 1980.

"SM16" or "Standard Methods, 16th Edition" means "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition, 1985.

"SM17" or "Standard Methods, 17th Edition" means "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 17th Edition, 1989.

"SM18" or "Standard Methods, 18th Edition" means "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 18th Edition, 1992.

"SOC" means a synthetic organic chemical listed in the National Primary Drinking Water Regulations. An SOC is a non-volatile organic compound for which maximum contaminant levels (MCLs) or maximum contaminant level goals (MCLGs) have been established.

"Solid/Hazardous Waste Programs" means the Department's programs implementing the Solid Waste Management Act, N.J.S.A. 13:1E–1 et seq., the Industrial Site Recovery Act, N.J.S.A. 13:1K–6 et seq., and the Spill Compensation and Control Act, N.J.S.A. 58:10–23.11 et seq.

"Solid/hazardous waste sample" means a regulatory sample analyzed to determine compliance with one or more of the Solid/Hazardous Waste Programs.

"SOP manual" means standard operating procedure manual. This manual includes step-by-step instructions for all procedures, operations, analyses, and actions whose mechanics are thoroughly prescribed and commonly accepted as the usual method for performing routine or repetitive tasks.

"State Primary Drinking Water Regulations" means those regulations promulgated as N.J.A.C. 7:10–5.

"State Secondary Drinking Water Regulations" means those regulations promulgated as N.J.A.C. 7:10–7.

"Static-toxicity test" means, for Acute toxicity testing, a test in which solutions and organisms are placed in chambers for the duration of the test without any exchange of the test solutions.

"Subsample" means a portion of a large volume homogenized sample.

"Subsequent to graduation" means the time after receipt of a specified degree.

"SW–846" means the USEPA's Test Methods for Evaluating Solid Waste—Physical and Chemical Methods, Third Edition, 1986, as amended or supplemented.

"Target compound" means any parameter for which quality control data are listed in the method.

"Technique" means the type of instrumental or manual procedure used to perform an analysis. For example, the potentiometric ion selective electrode determination of fluoride is one of four techniques used for the determination of fluoride in drinking water. There are three method references approved by USEPA that use this technique.

"Temporary approval" means either of the following:

1. A temporary approval for a laboratory to continue analyzing regulatory samples pending an on-site audit pursuant to N.J.A.C. 7:18–2.6(a)6; or

2. A temporary approval for a laboratory to continue analyzing regulatory samples for one or more categories in the solid/hazardous waste programs, pursuant to N.J.A.C. 7:18–2.6(c).

"Total length" means, for acute toxicity testing, the straight-line measurement from the tip of the snout of a fish to the extreme tip of the caudal fin.

"Toxicity test" means, for acute toxicity testing, a procedure in which the responses of aquatic organisms are used to detect or measure the presence or effect of one or more toxic substances or wastes, alone or in combination.

"Transient non-community water system" means a non-community water system that does not regularly serve at least 25 of the same persons over 6 months per year.

"Transport water" means, for acute toxicity testing, the fresh or salt water used to transport test organisms from an outside supplier's facility to the certified environmental laboratory; usually it is the water used by the supplier for culturing test organisms.

"Trip blanks" means a set of sample containers filled with analyte-free water that originates in the environmental laboratory, travels to the field site and remains unopened. This blank checks for potential contamination sources in sample container preparation, method blank water, and sample transport.

"USEPA" or "EPA" means the United States Environmental Protection Agency.

"USEPA–1987" means, for acute toxicity testing, "Guidelines for the Culture of Fathead Minnows Pimephales Promelas for Use In Toxicity Tests," USEPA, Environmental Research Laboratory, Duluth, MN, USEPA/600/3–87/001, January, 1987.

"USGS–83" means "Methods for the Determination of Organic Substances in Water and Fluvial Sediments," Book 5, 1983.

"USGS–76" means Fishman and Brown, "Selected Methods of the U.S. Geological Survey of Analysis of Wastewater," Open-file Report 76–177 (1976).

"VOCs" means volatile organic chemicals as listed in the National Primary Drinking Water Regulations. These are a group of purgeable organic compounds for which maximum contaminant levels (MCLs) or maximum contaminant level goals (MCLGs) have been established.

"Volatile organics" means those organic compounds that can be determined quantitatively by methods utilizing the purge and trap technique. VOCs are a subset of volatile organics.

"Volume Percent" means, for acute toxicity testing, equal to 100 x (volume of effluent)/(volume of effluent + volume of dilution water).

"Warm-water fishes" means, for acute toxicity testing, those species living and breeding in aquatic ecosystems with a maximum water temperature range of between 13 degrees Celsius and 27 degrees Celsius.

"Wastewater sample" means a regulatory sample analyzed to determine compliance with the Water Pollution Program.

"Water Pollution Program" means the Department's program implementing the Water Pollution Control Act, N.J.S.A. 58:10A–1 et seq.

"Water purveyor" means a person who owns or operates a public water system (as that term is defined in N.J.A.C. 7:10–1.3).

"Waters of the State" means the Atlantic Ocean and its estuaries, all springs, streams, and bodies of surface or ground water, whether natural or artificial, within the boundaries of this State or subject to its jurisdiction.

"Weis–1979" means, for acute toxicity testing, "Establishment of a Statewide List of Bioassay Organisms Pursuant to the New Jersey Surface Water Quality Standards," Judith S. Weis, Edmund Zimmerer, John Galandak, and Allen Marchinsin; Department of Zoology and Physiology, Rutgers, The State University; Revised March, 1979.

"Wide spectrum light" means light that approximates natural sunlight.

"Working level (WL)" means the concentration of short-lived radon decay products that will result in 130,000 million electron volts of potential alpha-particle energy per liter of air. Working level is a measure of radon decay product concentration in air.

"Year class" means, for acute toxicity testing, fish that originate from the same annual brood or spawning.

Administrative change.
See: 28 N.J.R. 4098(a).
Amended by R.1997 d.192, effective May 19, 1997.
See: 28 N.J.R. 4149(a), 29 N.J.R. 2275(a).
Added "N.O.A.E.C. (no observed adverse effort concentration) definitive toxicity test".
Amended by R.2001 d.15, effective January 2, 2001.
See: 32 N.J.R. 1113(a), 33 N.J.R. 44(a).
Rewrote section.

### 7:18–1.8 Severability

If any portion of this chapter is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected by that adjudication.

### 7:18–1.9 Signatories

(a) In each application for an initial certification, renewal certification or modification of a certification, the applicant shall include the following certification, signed by the individual specified in (b) below:

1. "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil and criminal penalties, including the possibility of a fine or imprisonment or both, for submitting false, inaccurate, or incomplete information."

(b) The following individual shall sign the certification required under (a) above:

1. If the applicant is a corporation, a principal executive officer of at least the level of vice president;

2. If the applicant is a partnership, a general partner;

3. If the applicant is a sole proprietorship, by the proprietor;

4. If the applicant is a municipal, state, Federal or other public agency or instrumentality, by the principal executive officer or his or her designee.

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## SUBCHAPTER 2. PROGRAM PROCEDURES AND REQUIREMENTS

### 7:18–2.1 Scope

(a) This subchapter establishes the following:

1. The procedure for becoming a certified environmental laboratory;

2. Requirements that a laboratory must meet to become a certified environmental laboratory;

3. The categories of analysis for which certification is available;

4. The procedure for a certified environmental laboratory to renew or modify its certification;

5. Procedures for cancellation, suspension, and revocation of certification;

6. The procedures to apply for approval of alternate test procedures; and

7. Fees for certification.

### 7:18–2.2 General prohibitions

(a) No laboratory other than a certified environmental laboratory shall analyze samples for the purpose of establishing compliance with any regulatory program.

(b) A certified environmental laboratory shall use only the methods listed on its Annual Certified Parameter List when analyzing samples for the purpose of establishing compliance with any regulatory program.

(c) Only a certified environmental laboratory may use the name "certified environmental laboratory" or any other name that is reasonably likely to lead the public to believe that a laboratory or other person is a certified environmental laboratory. Any laboratory or other person who is not a certified environmental laboratory shall not make an oral or written statement intended to mislead the public into believing that the laboratory or other person is a certified environmental laboratory.

### 7:18–2.3 Overview of the certification process

(a) A laboratory is eligible to become a certified environmental laboratory only if it completes the application requirements at N.J.A.C. 7:18–2.5, and demonstrates through the process set forth within this subchapter that it complies with the requirements in N.J.A.C. 7:18–2.6(a).

(b) If the Department determines that an applicant satisfies the requirements of (a) above, the Department shall issue the applicant a certificate and an Annual Certified Parameter List (ACLP) showing the parameters, techniques, method references, and corresponding methods for which the applicant is certified.

(c) The Department's annual certification period begins on July 1 of each year, and ends on the following June 30. A certification and an Annual Certified Parameter List expire at the end of the annual certification period for which they are issued, unless they are renewed in accordance with N.J.A.C. 7:18–2.7. The Annual Certified Parameter List shall indicate the certification period for which it is valid.

### 7:18–2.4 Categories for certification

(a) An applicant shall apply for certification to perform methods for use in one or more of the following regulatory programs:

1. Drinking Water Program;

2. Water Pollution Program;

3. Radon/Radon Progeny-in-Air Program;

4. Solid/Hazardous Waste Programs; and

5. CERCLA (CLP) Program.

(b) An applicant shall apply for certification to perform sample analysis and to report results for one or more parameters within one or more categories listed in (c) through (g) below.

(c) The parameters for which a laboratory may be certified to perform sample analysis and to report results for purposes of determining compliance with the Drinking Water Program are organized within the following categories:

1. Category SDW01, Microbiological Parameters;

2. Category SDW02, Inorganic Parameters, including Sodium & Calcium;

3. Category SDW03, Analyze–Immediately Parameters;

4. Category SDW04, Inorganic Parameters, Metals;

5. Category SDW05, Organic Parameters, Chromatography;

6. Category SDW06, Organic Parameters, Chromatography/Mass Spectrometry;

7. Category SDW07, Radiochemistry: Radioactivity & Radionuclide Parameters; and

8. Category SDW08, Radon in Drinking Water.

(d) The parameters for which a laboratory may be certified to perform sample analysis and to report results for purposes of determining compliance with the Water Pollution Program are organized within the following categories:

1. Category WPP01, Microbiological Parameters;

2. Category WPP02, Inorganic Parameters, Nutrients & Demand;

3. Category WPP03, Analyze–Immediately Parameters;

4. Category WPP04, Inorganic Parameters, Metals;

5. Category WPP05, Organic Parameters, Chromatography;

6. Category WPP06, Organic Parameters, Chromatography/ Mass Spectrometry;

7. Category WPP07, Individual Pesticides (GC, GC/MS, TLC);

8. Category WPP08, Acute Toxicity;

9. Category WPP09, Radiochemistry: Radioactivity & Radionuclide Parameters; and

10. Category WPP10, Radon in Wastewater.

(e) The parameters for which a laboratory may be certified to perform sample analysis and to report results for purposes of determining compliance with the Radon/Radon Progeny-in-Air Program are organized within the following category: Category RAP01, Radon/Radon Progeny-in-Air.

(f) The parameters for which a laboratory may be certified to perform sample analysis and to report results for purposes of determining compliance with the Solid/Hazardous Waste Program are organized within the following categories:

1. Category SHW01, Microbiological Parameters;

2. Category SHW02, Characteristics of Hazardous Waste;

3. Category SHW03, Analyze–Immediately Parameters;

4. Category SHW04, Inorganic Parameters;

5. Category SHW05, Organic Parameters, Preparation & Screening;

6. Category SHW06, Organic Parameters, Chromatography;

7. Category SHW07, Organic Parameters, Chromatography/Mass Spectrometry;

8. Category SHW08, Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans;

9. Category SHW09, Miscellaneous Parameters;

10. Category SHW10, Facility-Specific Parameters;

11. Category SHW11, Incinerator Emissions; and

12. Category SHW12, Immunoassay.

(g) The parameters for which a laboratory may be certified to perform sample analysis and to report results for purposes of determining compliance with the CERCLA (CLP) Program are organized within the following categories:

1. Category CLP01, Multi–Media, Multi–Concentration Inorganic Parameters;

2. Category CLP02, Multi–Media, Multi–Concentration Organic Parameters;

3. Category CLP03, Polychlorinated Dibenzo-p-dioxins & Polychlorinated Dibenzofurans;

4. Category CLP04, Multi–Media, High Concentration Inorganic Parameters;

5. Category CLP05, Multi–Media, High Concentration Organic Parameters;

6. Category CLP06, Low Concentration Water for Inorganic Parameters; and

7. Category CLP07, Low Concentration Water for Organic Parameters.

(h) Table 2.1 illustrates the organization of subchapters 3 through 9 (N.J.A.C. 7:18–3 through 9).

Table 2.1 Organization of Subchapters 3 through 9

| Subchapter | Title | Categories |
|---|---|---|
| 3 | General Laboratory Facilities & Equipment | All categories except SDW03, WPP03, SHW03 |
| 4 | Microbiology | SDW01, WPP01, SHW01 |
| 5 | Chemistry | SDW02, SDW04–SDW06, WPP02, WPP04–WPP07, SHW02, SHW04–SHW12, CLP01–CLP07 |
| 6 | Radiochemistry & Radon/ Radon Progeny-in-Air | SDW07, SDW08, WPP09, WPP10, RAP01 |
| 7 | Acute Toxicity | WPP08 |
| 8 | Analyze Immediately | SDW03, WPP03, SHW03 |
| 9 | Sample Requirements | All |

(i) An out-of-State laboratory, which has received NELAP accreditation from a state that has received NELAP recognition, shall be eligible for reciprocal accreditation to perform environmental sample analyses in accordance with (a) through (h) above, provided:

1. The laboratory is NELAP accredited by a state recognized as a NELAP accrediting authority for those fields of testing in which the laboratory is requesting accreditation pursuant to this subsection;

2. The laboratory submits to the Department an application on the form specified in N.J.A.C. 7:18–2.5; and

3. When requested by the Department, laboratory submits a copy of the laboratory's most recent (no more than two years old) NELAP on-site assessment reports.

(j) If, upon review of the documents listed in (i)2 and 3 above, the Department determines that the methods used by the out-of-State laboratory are equivalent to the requirements of this chapter, the Department shall not require an on-site survey by its inspectors and certification shall be granted after the assessed certification fees are paid (see N.J.A.C. 7:18–2.9, Fees).

(k) If, upon review of the documents listed in (i)2 and 3 above, the Department is unable to determine that the out-of-State laboratory has met the requirements of this chapter, then the Department shall contact the NELAP-primary accrediting authority and request that it conduct an on-site inspection of the laboratory.

Administrative change.
See: 28 N.J.R. 4098(a).
Amended by R.2001 d.15, effective January 2, 2001.
See: 32 N.J.R. 1113(a), 33 N.J.R. 44(a).
Added (i) through (k).
Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).
In (c) through (h), amended categories.

### 7:18–2.5 Procedure for initial application of a laboratory seeking certification

(a) A laboratory seeking initial certification for one or more parameters in any category listed in N.J.A.C. 7:18–2.4(c) through (g) shall submit an application to the Department, at the address listed in N.J.A.C. 7:18–1.6(a).

(b) The applicant shall complete the application form supplied by the Department, including the following:

1. The name of the applicant;

2. The mailing address and, if different, street address and municipality of laboratory location;

3. The hours of operation;

4. The areas in which certification is sought;

i. Regulatory programs;

ii. Categories;

iii. Parameters;

iv. Techniques; and

v. Method references and specific method numbers. A laboratory shall select only one or more method reference and corresponding method when multiple method references for a given technique are included in the DSAMs;

5. The type of environmental laboratory, identified by code listed on the application form;

6. The names of the following individuals:

i. The applicant's owner;

ii. The individual designated as the manager pursuant to N.J.A.C. 7:18–2.10(a)1; and

iii. All supervisors designated pursuant to N.J.A.C. 7:18–2.10(a)2;

7. A description of the education and experience of the following individuals, and academic transcripts for each such individual:

i. The manager, if responsible for technical functions;

ii. All supervisors; and

iii. Other laboratory technical staff;

8. If the applicant has participated in the USEPA Proficiency Testing Program and/or any Department-authorized proficiency program during the 12 months immediately preceding the application, the applicant may submit the results of such proficiency testing for any parameters for which the applicant is seeking certification;

9. The certification required under N.J.A.C. 7:18–1.9(a)1, signed by the individual required under N.J.A.C. 7:18–1.9(b);

10. If the laboratory is applying for certification in any of the categories listed in N.J.A.C. 7:18–5.1(a) for which published MDLs are available, MDL data for such methods;

11. Any other information included on the form, which is reasonably necessary to enable the Department to determine whether the applicant should be certified; and

12. The appropriate fees, pursuant to N.J.A.C. 7:18–2.9, in the form of a check payable to "Treasurer, State of New Jersey."

(c) An application is administratively complete if it contains everything required under (b) above. The Department shall advise the applicant in writing whether the application is administratively complete. If the application is not administratively complete, the Department shall identify the deficiencies. A determination that the application is administratively complete does not authorize the laboratory to perform sample handling, preservation, and analyses and reporting of data as regulated by this chapter.

(d) In addition to the information required under (b) above, the applicant shall provide any information that the Department requests as being reasonably necessary to determine whether the applicant should be certified.

Administrative change.
See: 28 N.J.R. 4098(a).

### 7:18–2.6 Conditions for the granting of certification

(a) To be eligible for certification, an applicant shall satisfy all of the requirements listed in (a)1 through 8 below:

1. The applicant has submitted a complete application meeting the requirements of N.J.A.C. 7:18–2.5(b), including the fees required under N.J.A.C. 7:18–2.9;

2. The applicant is capable of providing accurate, precise and reliable data in accordance with the mandates of State and Federal law and regulation;

3. The applicant possesses facilities, instruments, and equipment that meet the technical specifications required by the analytical methods, and that are properly maintained and operated;

4. The applicant's staff has the formal education, training and experience required under N.J.A.C. 7:18–2.10;

5. The applicant satisfies all applicable proficiency testing requirements under N.J.A.C. 7:18–2.13, including, but not limited to, acceptably analyzing any and all PE samples for each parameter within each category for which certification is sought;

6. The applicant satisfies the requirements for on-site audits under N.J.A.C. 7:18–2.14, including, but not limited to, the requirement to correct deficiencies identified by the Department in the on-site audit. If the applicant is seeking certification for radiochemistry: radioactivity and radionuclide testing, radon, and radon/radon progeny in air, and the Department is unable to schedule an on-site audit within 90 days after receiving an administratively complete application, the Department may grant temporary approval to a laboratory to analyze radiochemical samples, excluding radon/radon progeny-in-air, until the Department performs the on-site audit. If the Department grants temporary approval, the applicant shall continue to participate in the USEPA's proficiency testing program and acceptably analyze the program's samples;

7. The applicant completes its analysis of PE samples and all other requirements for certification within the time specified by the Department; and

8. The applicant complies with all other requirements of this chapter relevant to certification, and demonstrates that it is capable of complying with the relevant technical standards of performance found in N.J.A.C. 7:18–3 through 9.

(b) If the Department determines that an applicant is eligible for certification under (a) above, the Department shall issue the applicant a certificate and an Annual Certified Parameter List. The Department shall include the following information in the Annual Certified Parameter List:

1. The regulatory programs in which the environmental laboratory is certified to perform sample analysis and to report results to the Department;

2. For each regulatory program listed in (b)1 above, the specific parameters for which the environmental laboratory has demonstrated competence; and

3. The analytical technique, method reference and corresponding method number for which the environmental laboratory is certified.

(c) For categories SHW01 through SHW12 and CLP01 through CLP07, a phase-in period may be available during which a laboratory may continue to analyze regulatory samples by methods not included in the laboratory certification program prior to adoption of this chapter. To qualify for the phase-in period, the laboratory shall satisfy the requirements listed in (c)1 and 2 below.

1. By (date that is 180 days after the operative date of these new rules), the laboratory shall submit an administratively complete application to the Department pursuant to N.J.A.C. 7:18–2.5. When the Department determines that the application is administratively complete, it will provide the laboratory with temporary approval to analyze regulatory samples. The laboratory may continue analyzing regulatory samples while the temporary approval is in effect. The approval shall remain in effect until one of the following occurs:

i. The Department issues a certification and Annual Certified Parameter List pursuant to (b) above;

ii. The laboratory fails to satisfy the requirements for certification within the time specified in (c)2 below; or

iii. The Department denies the certification.

2. Within one year after submitting the application under (c)1 above, the environmental laboratory shall satisfy all other requirements for certification under (a) above. If the environmental laboratory satisfies all of these requirements except the requirement for an on-site audit, and the on-site audit requirement has not been satisfied because the Department has not scheduled the audit, the temporary approval shall remain in effect until an event listed in (c)1i or 1iii occurs.

3. If a laboratory fails to submit an administratively complete application within the time allotted under (c)1 above, or if the temporary approval expires under (c)1i or 1iii above, the phase-in period is forfeited. The laboratory shall discontinue all regulatory sampling and analysis for categories SHW01 through SHW12 and CLP01 through CLP07. Thereafter the laboratory shall follow the regular procedure for obtaining certification in accordance with N.J.A.C. 7:18–2.5.

Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).
In (c), amended categories in the introductory paragraph and in 3.

### 7:18–2.7 Procedures for renewal of certification status for a certified environmental laboratory

(a) Each certified environmental laboratory and each laboratory holding temporary approval shall follow the following procedure to renew its certification every certification year:

1. The laboratory shall obtain a renewal application form from the Department.

2. The laboratory shall review the information provided by the Department on the renewal application form. On the form, the laboratory shall correct any inaccurate or incomplete information, advise the Department of any changes in personnel or equipment, and indicate any desired modifications.

3. The laboratory shall submit the renewal application to the Department at the address listed in N.J.A.C. 7:18–1.6(a). When submitting the renewal application, the laboratory shall include the renewal application form provided by the Department, the fees required under N.J.A.C. 7:18–2.9, and the certification required under N.J.A.C. 7:18–1.9.

4. The laboratory shall submit the renewal application with the required fees by March 31 of each year. However, if the Department has not made the renewal application forms available by March 1, the deadline for submitting the renewal application shall be extended by one day for each day beyond March 1 that the forms are unavailable. For example, if the Department does not make the forms available until March 15, the deadline for submitting the renewal application shall be April 14.

5. A laboratory may submit a late renewal application after the deadline established under (a)4 above. However, if a late renewal application is submitted, the renewal may not be completed before the June 30 expiration date of the certification or temporary approval.

(b) If a laboratory's certification or temporary approval is not renewed before its expiration date, the certification or temporary approval and the Annual Certified Parameter List (if any) shall expire. If a laboratory's certification, temporary approval or ACPL expires, any analysis performed by that laboratory does not establish compliance with any regulatory program.

(c) A laboratory shall not submit a renewal application after the June 30 expiration date. If a laboratory fails to submit a renewal application before the expiration date, the laboratory's certification, temporary approval and ACPL (if any) shall expire. Any environmental laboratory allowing its certification to expire shall apply for a new certification by filing an initial application in accordance with N.J.A.C. 7:18–2.5.

Administrative change.
See: 28 N.J.R. 4098(a).

### 7:18–2.8 Procedure for modification of certification status by the addition or deletion of parameters, categories and/or combined categories

(a) A certified environmental laboratory seeking to modify its certification, or a laboratory seeking to modify its application for certification under N.J.A.C. 7:18–2.5, shall submit an application to the Department at the address specified in N.J.A.C. 7:18–2.5(a). In the application, the laboratory shall include the following:

1. Any changes that the laboratory seeks to make in the areas for which it is certified or has applied to be certified, including all information required under N.J.A.C. 7:18–2.5(b)4;

2. Information required under N.J.A.C. 7:18–2.5(b)6 and 7, with respect to any additional personnel needed for additional areas of certification pursuant to N.J.A.C. 7:18–2.10;

3. Information required under N.J.A.C. 7:18–2.5(b)8, if applicable to the modification;

4. The certification required under N.J.A.C. 7:18–1.9(a), signed by the person required under N.J.A.C. 7:18–1.9(b); and

5. The fees required under N.J.A.C. 7:18–2.9, in the form of a check payable to "Treasurer, State of New Jersey." However, if the modification is part of a renewal application under N.J.A.C. 7:18–2.7(b), then the laboratory need not pay the fee for "Administrative Activities—Request for modification in certified, applied or interim approval status."

(b) Before approving the modification, the Department may require proficiency testing pursuant to N.J.A.C. 7:18–2.13 and/or an on-site audit pursuant to N.J.A.C. 7:18–2.14. The Department shall base its decision to require proficiency testing and/or an on-site audit upon the degree of competence and compliance with this chapter that the environmental laboratory has demonstrated through previous proficiency testing and on-site audits.

(c) The Department shall approve the modification only if the laboratory satisfies all of the requirements under N.J.A.C. 7:18–2.6(a) that are applicable to the modification.

(d) Subsections (a) through (c) above do not apply to a modification to delete one or more parameters or categories from a laboratory's certification. No payment of a fee or Department approval is required to delete a parameter or category. To delete one or more parameters or categories, the laboratory shall send written notification to the Department at the address specified in N.J.A.C. 7:18–1.6(a), by certified mail or other means that provides a receipt for delivery; provided however, that the laboratory may instead provide this written notification as part of a renewal application under N.J.A.C. 7:18–2.7. The deletion shall be effective upon the Department's receipt of the notice.

### 7:18–2.9 Fees

(a) A laboratory applying for an initial or renewal certification or for modification of a certification shall include with the application the fees required under this section. Fees are not refundable.

(b) The fee schedule is set forth below. To calculate the fee for a given service, add the fee for the administrative activity and the fee for each category affected by the application. For example, if a laboratory seeks an initial certification in category SDW01, the fee would be the sum of $825.00 (the administrative activity fee) and $206.00 (the category fee), for a total of $1,031.

Environmental Laboratory Application

| | Change-of-Status and Certification Categories | | Fees |
|---|---|---|---|
| I. | Administrative Activities | | |
| | | Initial Application Fee For Certification | $825 |
| | | Renewal Application Fee For Certification | $295 |
| | | Request for modification in certified, applied or interim approval status | $236 |
| | | Alternate Test Procedure Application | $118 |
| | | Alternate Test Procedure Evaluation | $2,004 |
| II. | Drinking Water Program Categories (SDW01–SDW08) | | |
| | SDW01 | Microbiological Parameters | $206 |
| | SDW02 | Inorganic Parameters including Sodium and Calcium | $236 |
| | SDW03 | Analyze–Immediately Inorganic Parameters | $118 |
| | SDW04 | Inorganic Parameters, Metals | $118 |
| | SDW05 | Organic Parameters, Chromatography | $206 |
| | SDW06 | Organic Parameters, Chromatography/Mass Spectrometry | $265 |
| | SDW07 | Radiochemistry: Radioactivity and Radionuclide Parameters | $354 |
| | SDW08 | Radon in Drinking Water | $177 |
| III. | Water Pollution Program Categories (WPP01–WPP10) | | |
| | WPP01 | Microbiological Parameters | $206 |
| | WPP02 | Inorganic Parameters, Nutrients and Demand | $236 |
| | WPP03 | Analyze–Immediately Inorganic Parameters (Including Continuous Monitoring) | $118 |
| | WPP04 | Inorganic Parameters, Metals | $118 |
| | WPP05 | Organic Parameters, Chromatography | $147 |
| | WPP06 | Organic Parameters, Chromatography/Mass Spectrometry | $265 |
| | WPP07 | Organic Parameters, Individual Pesticides (GC, GC/MS, TLC) | $177 |
| | WPP08 | Acute Toxicity Parameters | $2,240 |
| | WPP09 | Radiochemistry: Radioactivity and Radionuclide Parameters | $354 |
| | WPP10 | Radon in Wastewater | $177 |
| IV. | Radon/Radon Progeny-in-Air Program Category (RAP01) | | |
| | RAP01 | Radon/Radon Progeny-in-Air | $236 |
| V. | Solid/Hazardous Waste Categories (SHW01–SHW12) | | |
| | SHW01 | Microbiological Parameters (SW/HW) | $206 |
| | SHW02 | Characteristics of Hazardous Waste (SW/HW) | $177 |
| | SHW03 | Analyze–Immediately Parameters (SW/HW) | $118 |
| | SHW04 | Inorganic Parameters (SW/HW) | $147 |
| | SHW05 | Organic Parameters, Preparation and Screening (SW/HW) | $118 |
| | SHW06 | Organic Parameters, Chromatography (SW/HW) | $236 |
| | SHW07 | Organic Parameters, Chromatography/Mass Spectrometry (SW/HW) | $206 |
| | SHW08 | Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans(SW/HW) | $236 |
| | SHW09 | Miscellaneous Parameters (SW/HW) | $177 |
| | SHW10 | Facility–Specific Parameters (SW/HW) | $1,061 |
| | SHW11 | Incinerator Emissions (SW/HW) | $236 |
| | SHW12 | Immunoassay | $118 |
| VI. | CERCLA-CLP Categories (CLP01–CLP07) | | |
| | CLP01 | Multi–Media, Multi–Concentration Inorganics (CERCLA–CLP) | $147 |
| | CLP02 | Multi–Media, Multi–Concentration Organics (CERCLA–CLP) | $383 |
| | CLP03 | Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans (CERCLA–CLP) | $236 |
| | CLP04 | Multi–Media, High–Concentration Inorganics (CERCLA–CLP) | $177 |
| | CLP05 | Multi–Media, High–Concentration Organics (CERCLA–CLP) | $118 |
| | CLP06 | Low–Concentration Water for Inorganics (CERCLA–CLP) | $177 |
| | CLP07 | Low–Concentration Water for Organics (CERCLA–CLP) | $236 |

(c) If a laboratory seeks to modify its certification as part of a renewal application under N.J.A.C. 7:18–2.7(b), the laboratory need not pay the fee for "Administrative Activities—Request for modification in certified, applied or interim approval status." The fee shall be the sum of the following:

1. The fee for "Administrative Activities—Renewal Application Fee for Certification"; and

2. The fee for each category for which the laboratory seeks to renew certification, or seeks to add certification. If the laboratory seeks to delete a category from its certification, the fee for that category shall not be included in the total fee.

(d) If a laboratory's application for certification is pending as of July 1 in a given year and it has not completed all of the requirements for certification by that date, the laboratory shall pay the Administrative Activities—Renewal Application Fee described in (b) above by July 1, but is not required to pay the fee for the category or categories in which certification is pending. If the laboratory becomes certified in such a category after July 1, it shall pay the fee for the category, prorated for the number of months (including any part of a month) remaining until the following July 1. The laboratory shall pay this fee within 30 days after the laboratory becomes certified. For example, if a laboratory applies for certification in Category SDW01 on October 1, 1996, but does not become certified in that category until September 15, 1997, it shall pay fees as follows:

1. On October 1, 1996, $825.00 for the initial application fee and $206.00 for the category;

2. On July 1, 1997, $295.00 for the renewal application fee; and

3. Within 30 days after September 15, 1997, $172.00 representing .the $206.00 category fee pro-rated for 10 months.

(e) Environmental laboratories applying for or renewing certification in the following combined categories are eligible for a reduced fee:

1. Microbiological parameters, Categories SDW01, WPP01, and/or SHW01: $295.00.

2. Inorganic parameters, Analyze–Immediately Categories SDW03, WPP03, and/or SHW03: $118.00.

3. Inorganic parameters, Metal Categories SDW04, WPP04, and/or SHW04: $147.00.

4. Radon in Water, Categories SDW08 and WPP10: $177.00.

(f) If the Department conducts an on-site audit of an out-of-State environmental laboratory, the Department shall provide the laboratory with an invoice specifying the costs of overnight travel, room and board, miscellaneous expenses of the Department certification inspectors, and (for environmental laboratories located outside the United States) expenses resulting from foreign currency exchanges. Within 60 calendar days after the date of the invoice, the laboratory shall remit to the Department the fee specified on the invoice.

(g) If the Department purchases PE samples to send to a laboratory for use in the proficiency testing program, the Department shall provide the laboratory with an invoice stating the actual cost paid to purchase the samples. Within 60 calendar days after the date of the invoice, the laboratory shall remit to the Department the amount specified on the invoice.

Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).
In (b), (d) and (e), amended categories.

### 7:18–2.10 Environmental laboratory personnel requirements

(a) A certified environmental laboratory shall employ qualified personnel who possess the education, training, and experience required under this section. The laboratory shall maintain current employee records that include a resume and college transcript documenting each employee's training, experience, duties, and dates of relevant employment. The laboratory shall include at least the following personnel:

1. An environmental laboratory manager, who shall be the individual in responsible charge of the laboratory;

2. One or more supervisors, who shall be qualified in accordance with the applicable provisions of (b) below to perform the tests and analyses within the Category or Categories for which the environmental laboratory is certified, or seeks certification. The environmental laboratory manager may also serve as a supervisor provided that the manager meets the qualifications for supervisor;

3. A Quality Assurance (QA) Officer. For a laboratory that is certified or seeks to be certified in any of Categories CLP01 through 7, the QA officer shall meet the applicable requirements of (b)9 below. For any other laboratory, the QA Officer shall meet the applicable requirements of (b) below for a supervisor in any Category, provided however, that an individual who meets only the requirements for a supervisor in the Categories listed in (b)2 below may serve as the QA Officer only in those Categories; and

4. If required under (b) below, technical support staff, who shall be qualified in accordance with the applicable provisions of (b) below for the tests and analyses within the Category or Categories for which the environmental laboratory is certified, or seeks certification.

(b) No environmental laboratory shall be certified to perform analyses in a Category unless the supervisor and operating personnel (where so indicated) meet the following requirements:

1. For microbiological testing in Categories SDW01, WPP01 and SHW01, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Microbiology Credits | Years of Experience Microbiological Analysis |
|---|---|---|---|
| A | ≥BA/BS[1] | 4[2] | 1 |
| B | AA[1] | 4[2] | 3 |
| C | None | 0[2] | 5 |

1 Degree in a chemical physical, biological, or environmental science from an accredited institution.
2 Course from accredited college, or equivalent course from a training institute if supervisor has less than four semester hours credit in bacteriology.

2. For chemical testing in analyze-immediately Categories SDW03, WPP03 and SHW03 for residual chlorine, chlorine dioxide, residual ozone, dissolved oxygen with probe, sulfite, temperature, pH, and Categories SDW02 and WPP02 for turbidity and residue-settleable, the supervisor shall have had at least three months of experience in performing these tests;

3. For chemical testing in Categories: DW2. Inorganic Parameters including Sodium and Calcium; WPP02. Inorganic Parameters, Nutrients & Demand (except those listed in (b)2 above), the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Years of Chemical Experience Chemical Analysis and/or Training |
|---|---|---|
| A | ≥BA/BS[1] | 1[2] |
| B | AA[1] | 3[2] |
| C | None | 5[2] |

1 Degree in a chemical physical biological, or environmental science from an accredited institution.
2 Have at least one year of laboratory experience in the chemical analysis of drinking water, water pollution, or solid/hazardous waste samples.

4. For chemical testing in Categories: SDW04. Inorganic Parameters, Metals; WPP04. Inorganic Parameters, Metals; SHW04. Inorganic Parameters, Metals; SHW09. Miscellaneous Parameters, and SHW10. Facility Specific Methods, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Years of Chemical Experience Chemical Analysis and/or Training |
|---|---|---|
| A | ≥BA/BS[1] | 1[2] |
| B | AA[1] | 3[2] |
| C | None | 5[3] |

1 Degree in a chemical physical, biological, or environmental science from an accredited institution.
2 Have at least one year of laboratory experience in the analysis of drinking water, water pollution, or solid/hazardous waste samples; and have six months experience in one or more instrumental techniques for the determination of metals, minerals (asbestos), metal ions, or anions, or have completed a formal training course in the operation of one or more of those instruments.

3 Same as footnote 2 above except that three years of laboratory experience in the analysis of drinking water, water pollution, or solid/hazardous waste samples is required.

5. Operators of ICP/MS instruments shall meet the requirements of (b)4 above, but in addition, are required to have both six months operating experience and a formal training course in ICP/MS;

6. Operators of transmission electron microscopes (TEMs) shall meet one of the qualification levels of (b)4 above, but the number of years of experience required at all levels must include one year in determining asbestos in air or water using a TEM and energy dispersive x-ray analyzer. Operators shall have completed a formal training course in transmission electron microscopy;

7. For chemical testing in Categories: SDW05, Organic Parameters, Chromatography; SDW06, Organic Parameters, Chromatography/Mass Spectrometry; WPP05, Organic Parameters, Chromatography; WPP06, Organic Parameters, Chromatography/Mass Spectrometry; WPP07, Individual Pesticides (GC, GC/MS, TLC); SHW05, Organic Parameters, Preparation & Screening; SHW06, Organic Parameters, Chromatography; SDW07, Organic Parameters, Chromatography/Mass Spectrometry; SHW08, Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans; SHW09, Miscellaneous Parameters; SHW10, Facility Specific Parameters; SHW11, Incinerator Emissions; and SHW12, Immunoassay, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Years of Chemical Experience Chemical Analysis and/or Training |
|---|---|---|
| A | ≥BA/BS[1] | 1[2] |
| B | AA[1] | 3[2] |
| C | None | 5[3] |

1 Degree in a chemical physical, biological, or environmental science from an accredited institution.
2 At least one year of laboratory experience in chemical testing of drinking water, water pollution, or solid/hazardous waste samples; and have six months experience in one or more instrumental technique (GC, LC, GC/MS, or LC/MS) being practiced for the analysis of drinking water, water pollution or solid/hazardous waste samples. A formal training course in the instrumental technique for which certification is sought may be substituted for the experience requirements.
3 Same as footnote 2 above except that three years of laboratory experience in chemical testing of drinking water, water pollution, or solid/hazardous waste samples is required.

8. Operators of GC/MS, and LC/MS instruments shall meet the requirements of (b)7 above, but in addition, are required to have both six months operating experience and a formal training course in the technique being practiced;

9. For chemical testing in Categories: CLP01, Multi–Media/Multi–Concentration Inorganic Parameters; CLP02, Multi–Media/Multi–Concentration Organic Parameters; CLP03, Polychlorinated Dibenzo-p-dioxins & Polychlorinated Dibenzofurans; CLP04, Multi–Media/High Concentration Inorganic Parameters; CLP05, Multi–Media High Concentration Organic Parameters; CLP06, Low Concentration Water for Inorganic Parameters; and CLP07, Low Concentration Water for Organic Parameters, the laboratory shall have qualified personnel to perform the analyses under the CLP categories of analysis.

10. For Radiochemical Testing in Categories: SDW07, Radiochemistry: Radioactivity & Radionuclide Parameters; SDW08, Radon in Drinking Water; WPP09, Radiochemistry: Radioactivity & Radionuclide Parameters; and WPP10, Radon in Wastewater, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Years of Experience Chemical Analysis and/or Training |
|---|---|---|
| A | ≥BA/BS[1] | 5[2] |
| B | AA[1] | 7[2] |

1 Degree in a chemical, radiochemical, radioisotope technology, biological, physical or environmental science from an accredited institution.
2 Two years of experience must be in radiochemical analysis.

11. For Category RAP01, Radon/Radon Progeny-in-Air, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Years of Chemical Experience Chemical Analysis and/or Training |
|---|---|---|
| A | ≥BA/BS[1] | 1[2] |
| B | AA[1] | 3[2] |
| C | None | 5[3] |

1 Degree in a chemical, radiochemical, radioisotope technology, biological, physical or environmental science from an accredited institution.
2 Two years of experience must be in radiochemical analysis.

12. For Acute Toxicity Testing in Category WPP08, the supervisor shall meet the requirements of at least one of the qualification levels listed below:

| Qualification Level | Degree | Credits | Years of Experience Acute Toxicity Testing and/or Training |
|---|---|---|---|
| A | ≥BA/BS[1] | 6[2] | 1[3,4] |
| B | MA[3] or MS[3] | 6[2] | —[4] |

1 Degree in a biological or environmental science from an accredited institution.
2 Shall include or be supplemented by six semester credit hours in any of the following subjects: (a) General Zoology; (b) Biological Methods and Experimental Design; (c) Ichthyology.
3 Shall have successfully completed at least six definitive bioassays prior to applying for supervisor. The laboratory shall retain the documentation for these assays, and make it available during an audit by a representative of the Department.
4 Demonstrate competency in the operation of bioassay equipment and techniques during an audit by a representative of the Department.

13. If the bachelor degree is required and was granted from a regionally accredited United States or Canadian college or university, the requirement is satisfied. If the degree was granted by a foreign college or university, a copy of the evaluation by the World Education Service, Inc., P.O. Box 745, Old Chelsea Station, New York, NY 10013, (212) 966–6311, shall be provided to the Department; and

14. The Department may waive the need for specified years of experience or academic training if an individual demonstrates that he or she has knowledge, expertise and ability that is at least equal to what would be expected from an individual with the required amount of experience and academic training.

Amended by R.2001 d.224, effective July 2, 2001.
See: 33 N.J.R. 1063(a), 33 N.J.R. 2284(c).

Amended categories throughout.

**7:18–2.11 Duties of environmental laboratory personnel**

(a) In its quality assurance/quality control manual maintained pursuant to N.J.A.C. 7:18–4.5, 5.5, 6.6, 7.7 and 8.4, a certified environmental laboratory shall include duties of the manager, all supervisors, and the quality assurance officer.

1. The duties of the manager include, but are not limited to, the following:

i. The manager shall administer the operations of the environmental laboratory including the reporting of tests and analyses. The manager shall be available for personal or telephone consultation with the environmental laboratory staff and the Department. If the manager is to be absent, the manager shall arrange for a substitute. When serving as supervisor or acting supervisor, the manager shall meet the requirements of N.J.A.C. 7:18–2.10(b);

ii. The manager shall assure that all laboratory personnel meet the applicable requirements of N.J.A.C. 7:18–2:10(b) for their classification; and

iii. The manager or designee thereof shall sign reports of analytical data. The laboratory shall inform the Department of the designee's name and authority to sign reports.

2. The duties of supervisors include, but are not limited to, the following:

i. Each supervisor shall monitor the performance of technical personnel performing the analysis of a parameter to determine whether the personnel are complying with applicable requirements of this chapter. Each supervisor shall report results within the Category or Categories for which the supervisor is qualified;

ii. Each supervisor shall only perform tests or analyses within the Category or Categories for which the supervisor is qualified; and

iii. Each supervisor shall oversee the performance of all laboratory procedures, tests, analyses, and quality assurance within the Category or Categories for which the supervisor is qualified, to assure that it is in compliance with this chapter.

3. The duties of the quality assurance officer include, but are not limited to, the following:

i. The quality assurance (QA) officer shall ensure that the environmental laboratory follows the quality control procedures of the DSAMs and of N.J.A.C. 7:18–3 through 8; and

ii. The QA officer shall implement the procedures of the environmental laboratory's quality assurance/quality control manual, pursuant to N.J.A.C. 7:18–4.5, 5.5, 6.6, 7.7 and 8.4.

Administrative change.
See: 28 N.J.R. 4098(a).

**7:18–2.12 Criteria for acceptance and analysis of environmental regulatory samples**

(a) A certified environmental laboratory shall offer as a service only those tests, analyses, and procedures that:

1. Are within the scope of the laboratory's certification and Annual Certified Parameter List;

2. For which it has a qualified supervisor who meets the applicable requirements of N.J.A.C. 7:18–2.10(b); and

3. For which personnel, equipment and facilities meeting the applicable requirements of this chapter are available.

(b) An environmental laboratory certified in an analytical method and claiming to perform that method for parties other than those in the regulated community shall always follow the requirements and criteria cited in that specific analytical method.

(c) This section applies to certified environmental laboratories and environmental laboratories that hold temporary approval.

**7:18–2.13 Proficiency testing program**

(a) A laboratory seeking certification for any parameter shall successfully complete the proficiency testing program described in (h) through (j) below for that parameter.

(b) To maintain certification, a certified environmental laboratory shall successfully complete proficiency testing pursuant to (h) through (j) below.

1. For all categories other than radiochemical testing, radon in water, and radon/radon progeny–in–air:

i. The Department or its designated testing program will conduct at least two proficiency tests per parameter (including indicator parameters) each year. All laboratories certified for that parameter (including indicator parameters) shall participate in at least one proficiency test each year. If a laboratory fails to successfully complete a proficiency test, it shall participate in the next scheduled proficiency test;

ii. Upon the Department's request, a particular laboratory shall participate in proficiency tests in addition to the test or tests under (b)1 above. The Department may make such a request based upon information indicating that the laboratory's analyses for the parameter in question do not meet the requirements of this chapter; and

iii. A laboratory shall not be required to participate in more than two proficiency tests pursuant to (b)1i and ii above in a certification year.

2. For radiochemical testing, a laboratory shall acceptably analyze one USEPA blind PE sample and two performance evaluation samples per year.

3. For radon in water, a laboratory shall acceptably analyze all required PE samples, not to exceed four samples per year.

4. For radon/radon progeny-in-air, a laboratory shall not be required to participate in more than four proficiency tests in a certification year.

(c) Proficiency testing for a specific parameter or group thereof in a particular Category is not required if the Department determines that PE samples are unavailable.

(d) Except as provided in (e) through (g) below, the Department or its designated proficiency testing program shall distribute PE samples or make them available, at times and frequencies that the Department determines are necessary for effective administration of proficiency testing. N.J.A.C. 7:18–2.9(g) provides for the Department to be reimbursed if it purchases PE samples to send to a laboratory for use in the proficiency testing program.

(e) A laboratory shall obtain PE samples for the determination of radioactivity and radionuclide parameters in water from the USEPA's radiological proficiency testing program or from the Department's designated proficiency testing program.

(f) A laboratory shall obtain PE samples for the determination of radon in water from the USEPA's Intercomparison Study Program or from the Department's designated proficiency testing program.

(g) A laboratory shall obtain PE samples for the determination of radon/radon progeny-in-air from the USEPA's Radon Measurement Program or from the Department's designated proficiency testing program.

(h) A laboratory participating in the proficiency testing program shall perform the following tasks:

1. Receive, examine, and analyze PE samples according to instructions;

2. Maintain all records of PE testing results;

3. For all Categories, except radiochemical testing, radon in water, and radon/radon progeny-in-air, submit the results of PE testing to the Department for evaluation, in accordance with the Department's instructions;

4. For radiochemical testing, radon in water, and radon/radon progeny-in-air Categories, submit results of PE testing in accordance with the directions of the USEPA or the authorized proficiency testing program; and

5. For radon/radon progeny-in-air, submit evaluated radon measurement proficiency results to the Department.

(i) The specific requirements for the proficiency testing program are set forth below in this subsection.

1. For a laboratory seeking certification in any Category other than radiochemical testing, radon in water, or radon/radon progeny–in–air:

i. A laboratory that has participated in the USEPA Drinking Water and/or Water Pollution Proficiency Testing Program during the immediate preceding 12 months may submit, for the Department's evaluation, the results for the parameters for which it is applying in the Department's Drinking Water and/or Water Pollution Programs. Otherwise the conditions of (i)1ii below apply; and

ii. A laboratory seeking certification in a specific parameter or group thereof under a particular Category shall acceptably analyze a PE sample obtained in accordance with (d) above. The laboratory shall have two separate opportunities to acceptably analyze PE samples for each parameter. If the laboratory fails in both opportunities to acceptably analyze PE samples for a parameter, the Department shall deny the application for certification. The laboratory may reapply for certification in that parameter.

2. For a laboratory seeking certification in radiochemistry, radioactivity and radionuclide testing, or radon/radon progeny–in–air:

i. For analysis of radiochemical parameters in water, the laboratory shall submit copies of USEPA performance evaluation reports indicating that for radiochemical PE tests analyzed within the preceding 12 months, two blind PE samples or two cross-check samples have been within the control limits established for each parameter in which certification is sought;

ii. For analysis of radon in drinking water and wastewater samples, the laboratory shall submit copies of USEPA performance evaluation reports indicating

that during the applicant's participation in the most recent USEPA Radon Intercomparison Study, at least two blind PE samples or two cross-check samples were within the established control limits; and

iii. For analysis of radon/radon progeny-in-air, the laboratory shall submit copies of performance evaluation reports showing passage of two Department-authorized proficiency tests. At least one of the tests shall be either the most recent round of the USEPA Radon Measurement Program or a proficiency test administered within the past 12 months from a Department-authorized proficiency testing program. The laboratory shall pass a test for each measurement device/technique for which certification is desired, prior to applying for certification.

3. For certified environmental laboratories:

i. For all Categories, except radiochemical testing, radon in water, and radon/radon progeny-in-air, the Department shall notify the laboratory, in writing by certified mail, of the following: an announcement of each proficiency test, the final shipping date of PE samples, and the date results are to be submitted to the Department.

ii. In connection with a proficiency test announced under (i)3i above, if a laboratory receives PE samples that are not in satisfactory condition, or does not receive PE samples at all, the laboratory shall notify the Department within 15 days after the final shipping date. The Department may establish a new date for submission of results for those laboratories requiring replacement samples, based on the date that replacement samples are sent to those laboratories. If a laboratory does not notify the Department within the allotted 15 days, the laboratory will be considered to have received all samples and received them in an acceptable condition for analysis;

iii. For the Radiochemical Categories, the scheduling and requirements for the proficiency test are as established by the USEPA. For the Radon/Radon Progeny-in-Air Categories, the laboratory shall contact the OQA to obtain a list of exposure facilities approved for the Department's authorized radon/radon progeny-in-air proficiency testing program. The laboratory shall arrange with the exposure facility to schedule an exposure period for the laboratory's test devices;

iv. During a proficiency test, if a laboratory decides to drop any parameter pursuant to N.J.A.C. 7:18–2.15(a), it shall notify the Department before the final date for submission of results. Otherwise, the laboratory shall report results for all analyses for which it was certified at the time of the proficiency test announcement;

v. The Department shall consider the results of each proficiency test in determining whether the certification of a laboratory should be maintained or suspended;

vi. The Department may require a laboratory to analyze additional PE samples beyond what is required under (i)3i above, if information available to the Department indicates that the laboratory is failing to acceptably analyze samples; and

vii. Upon request of any person using or requesting the services of a certified environmental laboratory, the laboratory shall make available all results of the past 12 months' PE testing.

(j) Specific requirements for acceptable analysis of PE samples are as follows:

1. For microbiological testing, chemical testing, and acute toxicity testing:

i. For all drinking water parameters and water pollution parameters tested using the USEPA proficiency studies, the reported values must fall within the acceptance limits established for a given PE sample study by the USEPA;

ii. For proficiency studies, inclusive of all parameters in all Categories (except radon/radon progeny–in–air) and conducted independently of the USEPA proficiency test programs for drinking water and water pollution, reported values for PE samples must fall within the following acceptance limits:

(1) For a set of PE samples from a natural sample matrix, analytical results for a given parameter must fall within the 99 percent confidence interval about the mean value; and

(2) For a set of PE samples with a known amount of analyte added, analytical results for a given parameter must fall within the 95 percent confidence interval about the target value for drinking water samples, and within the 99 percent confidence interval for other sample matrices; and

iii. For the radon/radon progeny-in-air measurement proficiency program the criterion used in evaluating the radon measurement test results requires that the value of the individual relative error (IRE) of radon measurement not exceed 25 percent.

**7:18–2.14 On-site audits**

(a) A certified environmental laboratory or a laboratory seeking certification shall permit and facilitate scheduled and unscheduled audits by the OQA or its designee as a condition of obtaining and maintaining certification. The laboratory shall allow the OQA access to its facility to conduct the audit. A refusal to allow entry is grounds for revocation or denial of certification.

**7:18–6.7 Requirements for records and data reporting**

(a) The laboratory shall retain records concerning radiochemical analyses. The records to be retained include raw data records, quality control data records (including records of all quality control checks under N.J.A.C. 7:18–6.6(c)), chain-of-custody forms, laboratory reports, and the information required under (d) below. The laboratory shall retain each record for at least five years after the date of the analysis, provided however, that the laboratory shall retain records of analyses for 10 years if the person requesting the analyses has informed the laboratory that the analyses were to be performed because of epidemiological or public health concerns.

(b) The laboratory shall file and maintain data and other records in an accessible location on the laboratory's premises for one year after the date of analysis so that reviews can be conducted during on-site audits.

(c) The laboratory shall not accept custody of regulatory samples unless a chain-of-custody form is submitted with the samples, in accordance with N.J.A.C. 7:18–9.3(b).

1. Before accepting custody of a regulatory sample, the laboratory shall determine that the sample is properly labeled and has met the handling and preservation requirements. If the sample fails to meet those requirements, the laboratory shall indicate that failure on the chain-of-custody section of the sample request form or the chain-of-custody form;

2. The laboratory's sample custodian accepting responsibility for the sample shall sign the chain-of-custody form;

3. The laboratory shall have an internal chain-of-custody procedure or an alternate sample tracking procedure which establishes a sample's integrity and completely tracks its custody during its lifetime in the laboratory; and

4. If the analysis was not performed at the laboratory that first received the sample, the chain-of-custody form shall include the name, address and identification number of the New Jersey certified environmental laboratory to which the sample was forwarded.

(d) The laboratory shall retain the following information as part of the records of analysis:

1. The assigned laboratory sample number or other unique form of identification;

2. The date, specific place, and time of the sampling;

3. The name and signature of the person who collected the sample;

4. Identification of sample as a routine distribution sample, check sample, raw or process water sample, or other special purpose sample;

5. The date that the laboratory received the sample;

6. The date and time of sample preparation and analysis;

7. The name and signature of the person or persons who performed the analysis;

8. For radon/radon progeny-in-air samples taken by a certified radon measurement specialist or certified radon measurement technician, a chain-of-custody form indicating the sampling device/technique that was used and whether the authorized measurement protocols were followed;

9. The type of analysis performed and the DSAM used; and

10. The results of the analysis and raw data generated by the analysis.

(e) The laboratory may transfer all information described in (d) above to tabular summaries, except for:

1. Information regarding compliance check samples as detailed in 40 CFR 141.33(b); and

2. The chain-of-custody forms described in (d)8 above.

(f) Upon completion of the analysis, the laboratory shall supply the original or a true duplicate of the results of the tests or analyses to the client. The laboratory shall include the following information in reporting the results:

1. The certified environmental laboratory name and New Jersey laboratory identification number;

2. The date, time, and location of sample analysis;

3. The name of the person or persons who performed the analysis;

4. The type of analysis performed and the analytical method employed;

5. The results of the analysis; and

6. The name and signature of the environmental laboratory manager or designee identified pursuant to N.J.A.C. 7:18–2.11(a)1iii.

(g) The laboratory shall not refer samples to another laboratory for analysis, unless the other laboratory is also a certified environmental laboratory. The laboratory requesting the analysis shall provide the results to the client, on the original or true duplicate forms from the certified environmental laboratory that performed the analysis, containing the New Jersey environmental laboratory identification number of the certified environmental laboratory that performed the analysis.

(h) If the laboratory discovers an error in the analysis of a regulatory sample, and the error may affect the validity of the reported analytical result, the environmental laboratory manager shall report the error to the regulatory program for which the analysis was conducted, and to the client. The laboratory shall make this notification within 72 hours after discovery of the error.

Administrative change.
See: 28 N.J.R. 4098(a)

## SUBCHAPTER 7. ACUTE TOXICITY TESTING

### 7:18–7.1 Scope

This subchapter applies to certified environmental laboratories when performing acute toxicity testing on regulatory samples, and to other laboratories performing acute toxicity testing on PE samples to become certified.

### 7:18–7.2 Laboratory facilities and safety

(a) A laboratory performing acute toxicity tests shall meet the following minimum requirements:

1. The laboratory shall meet all applicable requirements of N.J.A.C. 7:18–3, including, without limitation, N.J.A.C. 7:18–3.2;

2. The laboratory shall allocate floor space and bench top space as follows:

i. For bioassay-toxicity testing, the laboratory shall allocate at least 50 square feet of floor space with at least 20 square feet of bench top space. For each additional toxicity test to be performed concurrently, the laboratory shall allocate at least 15 additional square feet of bench top space;

ii. For rearing-holding of invertebrate test organisms, the laboratory shall allocate at least 50 square feet of floor space with at least 10 square feet of bench top space. For rearing-holding of vertebrate test organisms, the laboratory shall allocate at least 75 square feet of floor space with at least 15 square feet of bench top space; and

iii. The laboratory may either combine the water chemistry area with the equipment cleaning area, or separate the areas. The laboratory shall allocate a total of 60 square feet of floor space for water chemistry and equipment cleaning, with at least 20 square feet of bench top space. If the water chemistry and the equipment cleaning areas are separated, then the equipment cleaning area shall be no less than 15 percent (in square feet) of the floor and bench top space allocated to the water chemistry area. The water chemistry area is used for preparation and standardization of reagents and media, and for working with hazardous or noxious materials such as acids and solvents. The laboratory should separate this area from the area used for test organism culturing-holding and from the area used for toxicity testing. The equipment cleaning area is used for the decontamination of equipment used for sampling and/or testing and shall be separate from the test organism culturing-holding area and from the toxicity test testing area;

3. For bioassay-toxicity testing areas, the laboratory shall have a temperature-controlled room or water bath capable of maintaining the temperature of test solutions within ±two degrees Celsius of the test temperature;

4. For test organism rearing-holding areas, the laboratory shall have:

i. A temperature-controlled room or chamber capable of maintaining the temperature of solutions within ±two degrees Celsius of the selected temperature;

ii. A supply of distilled or deionized water adequate for making up reagents and media. The water shall satisfy the requirements of N.J.A.C. 7:18–7.4(a) for laboratory pure water; and

iii. A supply of high quality fresh and/or saltwater adequate for use in the rearing/holding tanks or vessels. The water shall satisfy the requirements of N.J.A.C. 7:18–7.4(b) for laboratory grade water; and

5. For water chemistry and equipment cleaning areas, the laboratory shall have:

i. Access to a well-ventilated area or fume hood for the safe use of noxious chemicals; and

ii. A supply of laboratory pure water satisfying the requirements of N.J.A.C. 7:18–7.4(a).

### 7:18–7.3 Laboratory equipment, instruments and materials

(a) A laboratory performing toxicity tests shall have, on the premises and under the control of the laboratory supervisor, equipment and instruments that satisfy the requirements of (a)1 through 14 below and N.J.A.C. 7:18–3.3.

1. For materials used in the construction of toxicity testing systems, test organism culturing systems, and sample collection, handling, and transport systems:

i. The laboratory shall use only materials listed as "Approved" in Table 7.3 below for the type of test organism in question.

Table 7.3
Materials for constructing toxicity testing systems, test organism culturing systems, and sample collection, handling and transport systems

| Material | Test Organisms: Vertebrate | Test Organisms: Invertebrate |
|---|---|---|
| Glass, borosilicate, tempered, or soda lime | Approved | Approved |
| Stainless steel, # 304 or 316 | Approved | Approved |
| Medical grade or food contact silicone, sealant, tubing, and stoppers | Approved | Approved |

| Material | Test Organisms: Vertebrate | Test Organisms: Invertebrate |
|---|---|---|
| Perfluorocarbon plastics | Approved | Approved |
| Polyethylene, white or clear | Approved | Approved |
| Polypropylene | Approved | Approved |
| Polycarbonate | Approved | Approved |
| Polystyrene | Approved | Approved |
| Acrylic | Approved | Approved |
| Tygon ®, clear or black | Approved | Not Approved (except for Mysids) |
| Nylon | Approved | Approved |
| Fiberglass | Approved | Approved |
| Potable water or food contact grade polyvinyl chloride | Approved | Approved |
| Rubber, Neoprene and Gum Latex | Not Approved | Not Approved |
| Ceramic (Aluminum Oxide) | Approved | Approved |

ii. The laboratory shall use glass, stainless steel, ceramic and perfluorocarbon plastics whenever possible for components that come in contact with wastewater samples;

iii. If the laboratory uses silicone, polyethylene, polypropylene, nylon, Tygon®, polycarbonate and polystyrene plastics for a component that comes in contact with wastewater samples, it shall either discard the component after a single use, or demonstrate that the component can be decontaminated, without significant degradation, by one or more cleaning procedures listed in N.J.A.C. 7:18–7.4(c). To demonstrate that the component can be decontaminated, the laboratory shall:

(1) Clean the component in accordance with the applicable procedures under N.J.A.C. 7:18–7.4(c) after using the component to conduct a compliance toxicity test;

(2) Remove the component, taking an adequate sample of each type of material being used;

(3) Segregate each type of material into a separate container, just large enough to completely immerse the materials in laboratory pure water. The laboratory shall have cleaned the container using the procedure under N.J.A.C. 7:18–7.4(c) appropriate to the test organism used;

(4) Soak the component in laboratory pure water for 24 hours;

(5) Decant a sufficient volume of water from each container (or groups of containers of like materials) to analyze for the organic compounds, metals and trace elements listed in N.J.A.C. 7:18–7.4(b)1;

(6) Perform an analysis for each type of material for which the laboratory seeks approval; and

(7) Forward the analytical results to the Department. The Department shall approve the use of the material only if the analytical results show that there is no significant degradation of the material, or crossover of contamination.

iv. The use of polyvinylchloride, fiberglass, and acrylics shall only be for holding, acclimating, and rearing system components and for dilution water storage and delivery system components. Before use, the laboratory shall test every batch of these materials for toxicity to the pertinent test organisms. The laboratory shall retain the documentation of such tests;

v. The laboratory shall not use Tygon® for components used in an invertebrate testing, holding, acclimating or rearing system except for Mysids. If the laboratory uses bakelite components in an invertebrate testing, holding, acclimating or rearing system, and if that bakelite is heated to sterilization temperatures, the laboratory shall not allow any other system components to come in contact with either the bakelite or the fumes arising from the bakelite;

vi. The laboratory shall not use in toxicity testing any material that is not listed in Table 7.3, without first obtaining the Department's written approval. To obtain the Department's approval, the laboratory shall test the material's toxicity to the pertinent test organisms and submit documentation of the testing to the Department. The Department shall approve the material only if the documentation demonstrates that the material does not exhibit toxic or subtoxic effects (that is, decreased brood size in invertebrate test organisms) to the test organisms; and

vii. Except for materials labeled and sold as either, "medical grade" or "food grade," the laboratory shall clean all new materials before using them. The laboratory shall follow the following cleaning procedure:

(1) Wash the materials with a solution consisting of a detergent and hot tap water. Prepare the solution according to the detergent manufacturer's instructions. Be sure that the detergent is of a type that leaves no toxic residue;

(2) Rinse the materials well with hot tap water to remove all traces of detergent;

(3) If the material is all-glass laboratory ware or perfluorocarbon plastic material, and has a capacity less than or equal to four liters, then soak glassware in 10 percent hydrochloric acid (HCl) for at least one hour to remove heavy metal contamination. If the

material is all-glass laboratory ware or perfluorocarbon plastic material, and has a capacity greater than four liters, then rinse it at least twice with 10 percent HCl. After soaking or rinsing with acid, rinse twice or more with laboratory pure water to remove all traces of acid; and

(4) If the material is perfluorocarbon plastic, rinse it twice with full strength acetone, then rinse it at least twice with laboratory pure water and air or oven dry it.

2. For flow through toxicity tests, the laboratory shall use a dilutor system for the accurate measuring, mixing, and delivery of sample and dilution water to the exposure chambers. Detailed descriptions of dilutor systems allowable are found in Standard Methods, 16th edition, and in EPA Acute Methods #027F–1993. The laboratory shall use a dilutor system that:

i. Provides an adequate supply of dilution water to maintain 24 hours of continuous operation. The system shall obtain the supply from a dilution water reservoir, or by direct continuous pumping from the source of the water;

ii. Is capable of metering the flow of dilution water and sample into a mixing chamber for the determination of concentrations. The system shall use a constant head box or metering pumps to meter the flow of dilution water and sample;

iii. Uses mixing chambers to ensure complete mixing of dilution water and sample before dispensing solutions into the exposure chambers;

iv. Uses separate delivery tubes to transmit the dilution water and sample from the flow splitters, after the mixing chambers, to each of the replicate exposure chambers;

v. Provides a flow rate through the exposure chambers that results in at least five 90 percent water volume changes every 24 hours, and that is sufficient to maintain dissolved oxygen in the exposure chambers in accordance with N.J.A.C. 7:18–7.5(h);

vi. Provides a flow rate through the exposure chambers that does not vary by more than ±10 percent among all exposure chambers or ±five percent within any given exposure chamber throughout the duration of the test;

vii. Maintains the test concentration in each exposure chamber within ±five percent of the starting concentration for the duration of the test;

viii. Should be designed to maintain a constant temperature in the exposure chambers within ±two degrees Celsius of the specified test temperature;

ix. Is designed to curtail automatically the delivery of the sample to the mixing chambers if the supply of dilution water to the mixing chamber is interrupted;

x. Is designed to prevent the test organisms from entering the overflow outlets in the exposure chambers;

xi. Is capable of maintaining at least five separate effluent dilutions and a control containing dilution water with replicate exposure chambers; and

xii. Has had its exposure chamber flow rate, exposure chamber effluent concentration accuracy, and test solution temperatures checked and calibrated initially and at least once per day for the duration of the test, including the last day of the test. The laboratory shall keep records of these calibrations in accordance with N.J.A.C. 7:18–7.7(i), and make them available to the Department during an inspection of the laboratory.

3. The laboratory shall use holding, acclimating and culturing chambers that:

i. Are constructed of non-toxic materials that satisfy the requirements of (a)1 above;

ii. Include devices for temperature control, or are located in a temperature-controlled room;

iii. Are constructed for ease of cleaning and the prevention of waste material build-up; and

iv. If used for vertebrate species, are shielded from outside disturbances. The laboratory may shield the chamber either by isolating it in a low-traffic area, or by shielding it individually. If the materials used to shield a chamber individually will contact the culture media, the laboratory shall use materials that satisfy the requirements of (a)1 above.

4. The laboratory shall use test chambers that:

i. Can accommodate the testing of fish species in containers with a test solution at least five centimeters (cm) deep;

ii. If fabricated from non-seamless stainless steel, have welded seams rather than soldered seams;

iii. If fabricated from lead-free glass, are made in one piece or made with the use of clear silicone adhesive, of the type approved by the manufacturer for use in aquaria, to bond the seams. The laboratory shall expose as little of the silicone adhesive to the test solution as possible. Extra beads of adhesive shall be placed only on the outside of containers; and

iv. Are designed to keep the surface areas as small as possible in relation to their volume, in order to limit sorption to the vessel walls. Containers to be used with flow-through tests shall be designed to keep the liquid surface area/volume ratio as small as possible in order to reduce loss of volatile substances.

5. A laboratory shall have and use a balance that:

1. The assessment of civil administrative penalties; and

2. The issuance of civil administrative orders.

### 7:18–10.2 Administrative orders

(a) Except as provided in (c) below, the Department may issue an administrative order against any certified environmental laboratory or other person who has violated any provision of this chapter, or any provision of an order issued pursuant to this chapter, for one or more of the following purposes:

1. To direct the laboratory or other person to comply with a provision of this chapter or of an order issued pursuant to this chapter;

2. To suspend or revoke a certified environmental laboratory's certification, in whole or in part, pursuant to N.J.A.C. 7:18–2.15; and

3. To assess civil administrative penalties in accordance with N.J.A.C. 7:18–10.3;

(b) The authority to issue an order pursuant to (a) above is in addition to any other remedies available to the Department pursuant to law.

(c) The authority to issue an order pursuant to (a) above does not apply to any violation arising in connection with the Radon/Radon Progeny-in-Air Program.

### 7:18–10.3 Civil administrative penalties

(a) Except as provided in (c) below, the Department may assess a civil administrative penalty against any certified environmental laboratory or other person who has violated any provision of this chapter, or any provision of an order issued pursuant to this chapter. The Department shall determine the amount of the penalty by:

1. Establishing the class of the violation that is the subject of the penalty, in accordance with N.J.A.C. 7:18–10.4; and

2. Selecting the penalty designated for the class of violation, in accordance with N.J.A.C. 7:18–10.5.

(b) The authority to assess a civil administrative penalty pursuant to (a) above is in addition to any other remedies available to the Department pursuant to law.

(c) The authority to issue a civil administrative penalty pursuant to (a) above does not apply to any violation arising in connection with the Radon/Radon Progeny-in-Air Program.

### 7:18–10.4 Classes of violations

(a) "Minor violation" means any violation of the requirements of this chapter or of any order issued pursuant to this chapter pertaining to laboratory administration procedures or to any laboratory operating procedures, other than specific analytical procedures. Minor violations include, but are not limited to, noncompliance with requirements pertaining to laboratory management procedures, failure to submit required fees, and failure to respond to notices of deficiencies that have not directly affected data quality. Violations of specific provisions of this chapter that are defined as minor violations include, but are not necessarily limited to:

1. N.J.A.C. 7:18–1.4(e), failure to display certification;

2. N.J.A.C. 7:18–2.11, noncompliance with requirements relating to managerial and supervisory duties;

3. N.J.A.C. 7:18–2.12(a)2 and 3, noncompliance with those criteria for compliance sample acceptance and analysis relating to personnel qualifications and laboratory management;

4. N.J.A.C. 7:18–2.14(c), failure to notify the Department of a change in the location of the laboratory;

5. N.J.A.C. 7:18–2.14(g), failure to notify the Department of the completion of corrective action;

6. N.J.A.C. 7:18–2.19(a), failure to report personnel changes;

7. N.J.A.C. 7:18–2.22(b)1, failure to obtain required written statements and disclaimers; and

8. N.J.A.C. 7:18–3.2, noncompliance with laboratory facility and safety requirements.

(b) "Moderate violation" means any violation of the requirements of this chapter or of any order issued pursuant to this chapter that directly affects the quality of laboratory data. These violations include, but are not limited to, noncompliance with those requirements pertaining to analytical procedures, quality control, data validity and integrity, chain-of-custody, laboratory performance, data reporting and sample collection, recordkeeping, and handling and preservation. A failure to make available or to maintain complete records is equivalent to a violation that directly affects data quality, because the Department is unable to verify facts relevant to data quality without adequate records. Violations of specific provisions of this chapter that are defined as moderate violations include, but are not necessarily limited to:

1. N.J.A.C. 7:18–2.10, noncompliance with laboratory personnel qualification requirements;

2. N.J.A.C. 7:18–2.14(f), failure to submit a corrective action plan in response to an audit within the time period provided;

3. N.J.A.C. 7:18–2.22(b)2, failure to provide notification along with report of analysis results that the analysis results are not to be used for regulatory purposes;

4. N.J.A.C. 7:18–2.12(b), failure to follow requirements and criteria in approved method, or N.J.A.C.

7:18–2.22(a), 4.3(a), 5.3(a), 6.4(a), 8.3(a), use of unapproved methods;

5. N.J.A.C. 7:18–3.3, noncompliance with requirements for laboratory equipment, supplies, materials and instrumentation;

6. N.J.A.C. 7:18–4, noncompliance with microbiological testing procedures, including equipment requirements, chain of custody procedures, quality control procedures, standard operating procedures, record keeping and data reporting procedures;

7. N.J.A.C. 7:18–5, noncompliance with chemical testing procedures including equipment requirements, chain of custody procedures, quality control procedures, standard operating procedures, recordkeeping and data reporting procedures;

8. N.J.A.C. 7:18–6, noncompliance with radiochemical testing procedures including equipment requirements, radon gas progeny test procedures, chain of custody procedures, quality control procedures, standard operating procedures, record keeping and data reporting procedures;

9. N.J.A.C. 7:18–7, noncompliance with acute toxicity testing procedures including equipment requirements, chain of custody procedures, quality control procedures, standard operating procedures, recordkeeping and data reporting procedures;

10. N.J.A.C. 7:18–8, noncompliance with requirements for performing analyze-immediately measurements;

11. N.J.A.C. 7:18–9, noncompliance with criteria for sample handling and preservation, collection procedures and chain of custody procedures;

12. N.J.A.C. 7:18–2.13(b), (c), (d) (e), (f) (g) (h) and (i)3, failure to maintain records of PE samples;

13. N.J.A.C. 7:18–4.6(a), (b) and (d), failure to maintain records as required;

14. N.J.A.C. 7:18–5.6(a) and (b), failure to maintain records as required;

15. N.J.A.C. 7:18–6.7(a), (b) and (d), failure to maintain records as required;

16. N.J.A.C. 7:18–7.7(b) and (h)1, failure to maintain records as required; and

17. N.J.A.C. 7:18–8.5(a) and (b), failure to maintain records as required.

(c) "Major violation" means a violation involving the analysis of samples for the purpose of establishing compliance with a regulatory program by a laboratory that is not a certified environmental laboratory; a violation involving the analysis of samples for the purpose of establishing compliance with a regulatory program, in a manner that is beyond the scope of a laboratory's certification and ACPL; or a violation involving the falsification of records. Violations of specific provisions of this chapter that are defined as major violations include, but are not necessarily limited to:

1. N.J.A.C. 7:18–1.4(c) and 2.2(b), performance of analyses or test methods beyond the purview of a certification;

2. N.J.A.C. 7:18–1.9(a), false certification of information by the laboratory;

3. N.J.A.C. 7:18–2.2(a), noncompliance with prohibition against noncertified laboratories analyzing samples to establish compliance with a regulatory program;

4. N.J.A.C. 7:18–2.2(c), misrepresentation of certification;

5. N.J.A.C. 7:18–2.6(c)3, failure to cease compliance sampling and analyses activities governed by this chapter or the statutes pursuant to which this chapter is promulgated upon the expiration or termination of temporary approval;

6. N.J.A.C. 7:18–2.12(a)1, offering to perform services beyond the scope of the laboratory's certification;

7. N.J.A.C. 7:18–2.14(a), denial of access by Department personnel for audit purposes; and

8. N.J.A.C. 7:18–2.22(a), 4.3(a), 5.3(a), 6.4(a), 8.3(a), performance of analyses beyond the scope of certification; and

9. N.J.A.C. 7:18–2.22(b)3, misrepresentations made to persons other than the Department involving the laboratory's status as a certified environmental laboratory.

Amended by R.2001 d.277, effective August 6, 2001.
See: 33 N.J.R. 449(a), 33 N.J.R. 2664(a).
In (a)1 and (c) 1, amended the N.J.A.C. references.

### 7:18–10.5 Civil administrative penalty determination

(a) Each violation of any of the provisions of this chapter or of any order issued pursuant to this chapter shall constitute a separate and distinct offense.

(b) Subject to the provisions of (c) below, the matrix of civil administrative penalties for violations of any provision of this chapter is as follows:

| Class of violation | 1st violation | 2nd violation | 3rd and subsequent violations |
|---|---|---|---|
| Minor | $ 250 | $ 500 | $ 1,000 |
| Moderate | $ 1,000 | $ 2,000 | $ 5,000 |
| Major | $ 5,000 | $10,000 | $25,000 |

(c) Notwithstanding (b) above, the civil administrative penalty shall be $5,000 for any second or subsequent violation of any provision of this chapter arising in connection with the Safe Drinking Water Program, and which are defined as minor or moderate.

(d) The Department will treat a violation as a first violation for purposes of determining the civil administrative penalty amount if the violator has not committed the same violation in the three calendar year period immediately preceding the date of the violation at issue.

(e) The Department may reduce or increase any penalty assessed pursuant to the provisions of this subchapter, or take additional enforcement action available to it pursuant to law, on the basis of any one or more of the factors listed in (e)1 through 7 below. No such factor constitutes a defense to any violation. The factors are:

1. The compliance history of the violator;

2. The number, frequency and severity of the violations;

3. The measures taken by the violator to mitigate the effects of the current violation or to prevent the occurrence of future violations;

4. The deterrent effect of the penalty;

5. The cooperation of the violator in correcting the violation, remedying any environmental damage caused by the violation and ensuring that the violation does not recur;

6. Any unusual or extraordinary costs directly or indirectly imposed on the public by the violation; and

7. Any other extenuating, mitigating or aggravating circumstances.

### 7:18–10.6 Procedures for civil administrative orders, assessment of civil administrative penalties and suspension or revocation of certification

(a) Any order, notice of civil administrative penalty assessment, notice of suspension of certification or notice of revocation of certification issued pursuant to this chapter shall:

1. Be served either personally or by certified mail, return receipt requested upon the person or persons who are the subject of the order or notice;

2. Identify the person or persons claimed by the department to have violated any provision of this chapter;

3. Describe the activity or activities which are in violation;

4. Identify the specific provision or provisions of this chapter which have been violated;

5. Describe the remedial or other action which must be implemented or caused to be implemented by the violator and the time periods within which such implementation shall commence and be completed;

6. Identify the office within the department to which any required reply or other correspondence must be directed;

7. Advise the person or persons named in the order of the right to request an adjudicatory hearing pursuant to the provisions of N.J.A.C. 7:18–2.17;

8. In the case of a civil administrative penalty assessment, specify the amount of the civil administrative penalty to be imposed;

9. In the case of a suspension or revocation of certification, a description of the areas in which the certification is to be suspended or revoked and the specific grounds for the suspension or revocation; and

10. In the case of a suspension of certification, the length of time for which a suspension will remain in effect.

(b) If a civil administrative penalty is assessed against more than one person for the same violation or violations, each shall be jointly and severally liable for the penalty assessed.

(c) Suspension or revocation of certification shall commence when the notice of suspension or revocation becomes a final order pursuant to (c)1, 2 or 3 below, or when the laboratory receives a final order in a contested case proceeding, whichever comes first. Payment of a civil administrative penalty is due when a notice of civil administrative penalty assessment becomes a final order pursuant to (c)1, 2 or 3 below, or when the laboratory receives a final order in a contested case proceeding, whichever comes first. A notice of suspension or revocation, or a notice of civil administrative penalty assessment, becomes a final order as follows:

1. If no hearing is requested pursuant to N.J.A.C. 7:18–2.17, a notice of civil administrative penalty assessment becomes a final order on the 21st day following receipt of the notice of civil administrative penalty assessment by the violator;

2. If the Department denies a hearing request, a notice of civil administrative penalty assessment becomes a final order upon receipt by the violator of the notice of denial;

3. If a hearing request is submitted by the violator and subsequently withdrawn, the notice of suspension or revocation, or the notice of civil administrative penalty assessment, becomes a final order upon such withdrawal unless the violator and the department have executed an administrative consent order or comparable instrument providing otherwise.

### 7:18–10.7 Procedures to request an adjudicatory hearing to contest an administrative order, administrative penalty assessment, suspension of certification or revocation of certification

A laboratory or other person may request an adjudicatory hearing to contest an administrative order, notice of civil administrative penalty assessment, or suspension or revocation of certification, in accordance with N.J.A.C. 7:18–2.17.

**7:18–10.8 Civil penalties for violations of N.J.S.A. 26:2D–70 et seq. (The provisions of the Radiation Protection Act governing Radon)**

(a) Any person who violates any provision of N.J.S.A. 26:2D–70 (the provisions of the Radiation Protection Act governing Radon), or who violates any provision of this chapter in connection with the Radon/Radon Progeny-in-Air Program, shall be liable, upon order of a Court, to a civil penalty of not more than $2,500.

(b) Any penalty ordered as provided in this section may be imposed and collected with costs in a summary proceeding pursuant to the Penalty Enforcement Law, N.J.S.A. 2A–58–1 et seq. The Superior Court and the municipal court shall have jurisdiction to enforce the provisions of Penalty Enforcement Law in connection with penalties pursuant to this section.

**7:18–10.9 Other enforcement actions**

Notwithstanding the availability of any other remedies, the Department may, at its discretion seek any other remedies it may have available pursuant to applicable law, including but not limited to, injunctive relief and civil penalties and criminal penalties.