

Program Administration

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Accreditation Structure

From its inception in 1986, the Laboratory Certification & Registration Program has used a “test category-test” certification structure. In addition, there were basically two certifications, one for drinking water (test category 18), and the other to cover virtually all other matrices (all categories except 18).

The department now certifies and registers laboratories by specific *fields of accreditation*. Accreditation is offered as either certification or registration.

With the 2008 revisions to NR 149, we are changing to a 3-tier structure which begins with matrix. Certification matrices offered will be Aqueous, Solid, and Drinking Water. The complete 3-tier structure for Aqueous and Solid matrices will be “matrix–technology–analyte (or analyte group)”. For Drinking Water, the structure will be “matrix–method–analyte (or analyte group)”.

The EPA required states to certify by individual methodology for drinking water parameters several years ago, so for labs testing drinking water, program structural changes will be more cosmetic.

3-Tier System

Tier 1: Matrix (Options= Aqueous, Solid, Drinking Water)

Tier 2: Technology (*Aqueous and Solid*) **or Method** (*Drinking Water*)

Tier 3: Analyte (*or analyte group*)

Aqueous and Solid Matrices

Matrix

Technology

Analyte (*or analyte group*)

Drinking Water Matrix

Matrix

Method

Analyte (or analyte group)

Classes

"Analytical class" means a set of analytes or analyte groups of similar behavior or composition, or a set of analytes or analyte groups regulated under the same provisions of the federal safe drinking water act, that is used to organize the third tier of certification or registration.

Largely, classes are used to facilitate review of certificates by end users. The use of these classes allows us to "group" like parameters in a logical sequence for placement on a certificate. For drinking water, the class is also used as the basis for fee assessment instead of technology, as is used for aqueous and solid matrices)

Aqueous and Solid Matrices

Laboratories analyzing aqueous and solid matrices may be certified or registered for analyte groups belonging to the analytical classes:

- General Chemistry
- Metals
- Base, Neutral, and Acid Extractable Semivolatile Compounds, including but not limited to:
 - Aldehydes and Ketones
 - Benzidines
 - Chlorinated Hydrocarbons
 - Explosive Residues
 - Haloethers
 - Nitroaromatics and Cyclic Ketones
 - Nitrosamines
 - Nonhalogenated Organics
 - Phenols
 - Phthalate Esters
- Pesticides and their metabolites, including, but not limited to:
 - Acid Herbicides
 - Nitrogen
 - N-Methyl Carbamates and Substituted Ureas
 - Organochlorine
 - Organophosphorus
 - Triazines
 - Pesticides Not Otherwise Specified
- Petroleum Hydrocarbons

- Polychlorinated Biphenyls (as Aroclors, and as Congeners)
- Polychlorinated Dibenzo-p-Dioxins and Furans
- Polynuclear Aromatic Hydrocarbons
- Volatile Organic Compounds

Drinking Water Matrix

Laboratories analyzing drinking water may be certified for analytes or analyte groups belonging to the following analytical classes:

- Disinfection Byproducts
- Primary Inorganic Contaminants (Non-Metals)
- Primary Inorganic Contaminants (Metals)
- Secondary Contaminants (Non-Metals)
- Secondary Contaminants (Metals)
- Synthetic Organic Contaminants (SOC) – Dioxin
- SOC – Organochlorine Pesticides
- SOC – N/P Pesticides
- SOC – Herbicides
- SOC – Miscellaneous
- Trihalomethanes (THM)
- Volatile Organic Compounds (VOC)

Certificate Changes

For small wastewater labs analyzing only wastewater samples, your certificate will look different, but it should be a relatively seamless transition. The changes will be most noticeable for those labs that analyze both aqueous and solid (e.g., soil, sediment, dewatered sludges, waste) samples. Where the existing certification allowed analysis of both aqueous and solid samples if you maintained certification or registration for a given test category (again, other than category 18), now labs will have to maintain specific certification to perform testing on solid matrices.



For a small wastewater lab analyzing BOD, TSS, ammonia (by ion-selective electrode), and total phosphorus (colorimetric), the change will look something like:

EXISTING NR149
CERTIFICATION/REGISTRATION

9/1/08 REVISIONS TO NR149
CERTIFICATION/REGISTRATION

Test Category 01 Oxygen Utilization
Biochemical Oxygen Demand
Test Category 02 Nitrogen
Ammonia
Test Category 03 Phosphorus
Total Phosphorus
Test Category 04 Physical
Total Suspended Solids

Matrix: Aqueous
Technology: BOD assays (BOD or cBOD)
Analyte: Biochemical Oxygen Demand (BOD)
Technology: Electrometric Assays
Analyte: Ammonia as N
Technology: Colorimetric or Nephelometric
Analyte: Total Phosphorus
Technology: Gravimetric Assays – Residue
Analyte: Total Suspended Solids

Labs will only see a significant difference if either they analyze solid samples as well as aqueous samples, or if they choose to be certified to perform multiple analytical technologies for a given analyte (or analyte group). The best example of this would be to consider a lab that is currently certified to analyze lead. The lab analyzes both waters (aqueous) and solids. Under the “old” rule, the lab would need to be certified for the test “Lead” under test category 08, “Metals I”. Pretty simple.

Note that this example covers ONLY lead. For a large-scale commercial laboratory performing multiple technologies for a broad spectrum of analytical parameters, this certification array can become quite complex. In this case, the lab went from one generic

For aqueous samples, a lab wishes to be certified to perform lead testing by graphite furnace atomic absorption (GFAA), flame atomic absorption (FLAA), ICP, and ICP/MS. For solid matrices, the lab generally will use flame AA or ICP. Under the new rule, the lab might choose to establish the following certification array:

CERTIFICATION

Matrix: Aqueous

Class: Metals

Technology: FLAA

Analyte: Lead

Technology: GFAA

Analyte: Lead

Technology: ICP

Analyte: Lead

Technology: ICP/MS

Analyte: Lead

CERTIFICATION

Matrix: Solid

Class: Metals

Technology: FLAA

Analyte: Lead

Technology: ICP

Analyte: Lead

Certificate Management

Certificates are issued to the owner or legally responsible party of a laboratory. Some facilities are owned by a municipality, but are operated by a private contractor. In these instances, the municipality always remains the “owner” and certificates will be generated in their name. The entity that operates a laboratory is not entitled to a certificate unless they are also the facility owner. The LabCert Program reserves the right to issue certificates that identify the fact that the laboratory is owned by one entity and operated by another.

Certificates are the property of the department and shall be returned upon request. Labs may not alter or modify certificates. Labs doing so may be subject to revocation of their entire certifications or registrations.



Certificates are required to be displayed conspicuously. “Conspicuously” means in a clearly visible location, such as on a wall, the side of a file cabinet, etc. Essentially, one would not have to rummage for it within a file drawer or cabinet. If a certificate is readily available on a website, that would be an acceptable option.

Why the change? The intent here is to ensure that laboratories are sufficiently familiar with their certifications (registrations) such that performing testing without the requisite accreditation ceases to be a perennial concern of the program.

PT Deadlines

The 2007-08 changes to NR 149 incorporate both a relatively minor timetable change and then procedural changes to match program structural amendments. The schedule change affects the deadline for submitting PT results to complete annual certification/registration renewal. Historically, with the certification year (and new certificates printed) beginning September 1 of each calendar year, PT sample results were required to be submitted prior to the close of business on August 31. **With the changes to NR 149, this deadline is moved a little more than 2 weeks back to August 15.**

This may seem like a small change, but we typically receive a large volume of “last minute” PT results required to “fill a hole”. As much as 10% or more of laboratories routinely find themselves submitting results for one or more parameters in the days leading up to the new certification year. This change will require labs to pay closer attention to their PT sample needs and minimize the time that we have to spend generating new and replacement certificates in the last two weeks of a certification period.