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For laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), proficiency testing is conducted in compliance with the National Environmental Laboratory Accreditation Conference (NELAC/TNI) Proficiency Testing Standard.

Proficiency test (PT) samples are distributed by category and discipline semi-annually by the NYSDOH Wadsworth Center PT Program. The categories and disciplines offered include the following:

Potable Water Chemistry & Radiochemistry
Potable and Non-Potable Water Bacteriology
Asbestos in Bulk Material and Fiber in Air
Non-Potable Water / Solid & Hazardous Waste / Air & Emissions Chemistry
Asbestos in Water, Air and Solid Waste by TEM

Chemistry (including radiochemistry) proficiency testing consists of one sample for each analyte in the test series. Not all analytes offered for accreditation are required to be proficiency tested. Bacteriological proficiency testing consists of one (for Non-Potable Water) to ten samples (for Potable Water). Samples are offered in bacteriology for standard plate count in Potable Water, Enterococci in Non-potable Water, Total Coliforms and Fecal Coliforms in Non-potable Water, and E. coli enumeration in Potable Water. Refer to Item 316 for a complete listing of samples and analytes.

Although supplied by the NYSDOH Wadsworth Center PT Program, PT samples may also be obtained from another organization accredited by a Proficiency Testing Provider Accreditor that meets the NELAC/TNI requirements. Other organizations that are accredited to provide PT samples for NELAP are listed on this website: http://www.nelac-institute.org/ptproviders.php.

Close dates of successive PT samples for fields of proficiency testing must be at least five (5) months apart and no longer than seven (7) months apart from the prior PT study.

Fields of Proficiency Testing (FoPT)

Laboratories are required to test PT samples by each technology used in the laboratory for the particular analyte in the particular matrix. As an example, assume a laboratory is accredited for the following Fields of Accreditation:

Non-Potable Water -- EPA 200.9 -- Lead
Non-Potable Water -- EPA 200.7 -- Lead
Non-Potable Water -- EPA 6010 -- Lead

The laboratory would be required to analyze the sample and report a result by method EPA 200.9 (GFAAS technology) and either EPA 200.7 or EPA 6010 (both methods being

ICP-AES technology). The same PT sample can be used for all technologies. A listing of technologies may be found in item 180.6.

Proficiency Testing Requirements

To be accredited initially, laboratories must participate in two (2) successful PT studies for each FoPT. To maintain accreditation, the laboratory must achieve a passing score, on an on-going basis, in two (2) out of three (3) successive PT studies. At least one of the scores must be less than six (6) months old.

Each unsatisfactory analytical result requires that the laboratory's management investigate the root cause of laboratory's performance and establish a corrective action report. The corrective action report must be on file and available for review during an on-site assessment. **Also, the laboratory must provide a corrective action report to ELAP within thirty (30) calendar days of a request by the program.**

Laboratories failing to maintain a passing score on an on-going basis in two (2) out of three (3) successive PT studies will be suspended on an individual analyte basis. Laboratory accreditation can be reinstated for the analyte by successfully analyzing PT samples from a NELAC-accredited PT provider, provided such supplemental PT studies are performed at least **seven (7) days apart from the close date of one study to the opening date of another study**. The laboratory must authorize the PT provider to release all results used for accreditation and/or remediation of failed studies to ELAP.

The laboratory's management and analysts must ensure that all PT samples are managed, analyzed and reported in the same manner as real environmental samples (i.e., using the same staff, methods, calibration and QC procedures, replicates, equipment, facilities, and frequency of analysis).

The following additional requirements for Potable Water proficiency testing have been imposed by the EPA Office of Water.

1. A PT sample must be successfully analyzed by every method once per year. Typically, this requirement can be met by alternating methods between the two PT rounds conducted in a given year.

2. A laboratory accredited for ALL regulated Volatile Organic Compounds (VOC)[1] or ALL regulated Organic Disinfection Byproducts[2] must also satisfy the "80% Rule" [40 CFR 141.24 (f)(17)(i)(B)]. If the laboratory fails to maintain a passing score on at least 80% of the analytes in any proficiency test, accreditation for all the analytes in the group is suspended. In order for reinstatement of accreditation for the group, the laboratory must than achieve a passing score on at least 80% of the analytes in two successive proficiency tests conducted **at least seven (7) calendar days from the close date of one study to the opening date of another study.**

Value Assignment for Analytes

Assigned values for sample analytes are selected randomly within the FoPT ranges described in the TNI FoPT tables. The assigned value is the actual chemistry analyte concentration in the sample as determined gravimetrically during manufacture and verified by in-house validation testing prior to shipment. For Asbestos and microbiology samples the assigned value is the mean of the in-house verification analyses. Sufficient homogeneity is also established through this in-house testing prior to shipment. The procedures used are adapted from the TNI Standard Volume 3 for the Environmental Sector.

Stability is confirmed after the close date of the study in accordance with the procedures adapted from the TNI Standard Volume 3 for the Environmental Sector.

[1]Regulated VOCs are: benzene; carbon tetrachloride; chlorobenzene; 1,2-dichlorobenzene; 1,4-dichlorobenzene; 1,2-dichloroethane; cis-dichloroethene; trans-dichloroethene; dichloromethane; 1,2-dichloropropane; ethylbenzene; styrene; tetrachloroethene; 1,1,1-trichloroethane; trichloroethene; toluene; 1,2,4-trichlorobenzene; 1,1-dichloroethene; 1,1,2-trichloroethane; vinyl chloride; xylenes (total).

[2]Regulated Organic Disinfection Byproducts are: dibromoacetic acid; dichloroacetic acid; monobromoacetic acid; monochloroacetic acid; trichloroacetic acid