Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

William X. Wall Experiment Station • 37 Shattuck Street, Lawrence MA 01843 • 978-682-5237

Charles D. Baker
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Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

June 17, 2020

RE: Laboratory Certification Program Policy on Chemistry Proficiency Testing (Policy # WES-2020.001)

Dear Laboratory Director or Other Interested Party:

Enclosed is the updated Massachusetts Department of Environmental Protection Laboratory Certification Program (LCP) Policy on Chemistry Proficiency Testing. This policy replaces Policy # WES-14.001.

This revised policy reflects recent changes to Massachusetts' regulations for the *Certification and Operation of Environmental Analysis Laboratories* at 310 CMR 42.00. The effective date of the revised regulations is June 12, 2020.

This policy clarifies proficiency test (PT) requirements for analytes added to the LCP scope of certification. The policy also updates regulatory citations, division and program titles, and web links.

The revised policy specifies that to obtain or maintain certification for per- and polyfluoroalkyl substances (PFAS), the laboratory must achieve acceptable results for each analyte included in the PT evaluation that will be reported by the laboratory. A laboratory that fails to satisfactorily analyze one or more analytes included in the PT sample, must correctly analyze any failed analytes in a follow-up study.

At a minimum, the following analytes must be included in the PFAS PT evaluation:

Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)
Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonic acid (PFOS)
Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)

If you have any questions concerning this policy, please contact Lisa J. Touet, Director of the LCP, at 978-242-1364.

Sincerely,

Oscar C. Pancorbo, Ph.D.
Division and Station Director
Division of Environmental Laboratory Sciences
Senator William X. Wall Experiment Station

cc: Ann Lowery, MassDEP, BPE
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MassDEP Certified Laboratories
Proficiency Test Providers

Massachusetts Department of Environmental Protection
Division of Environmental Laboratory Sciences
Senator William X. Wall Experiment Station

Laboratory Certification Program
Policy on Chemistry Proficiency Testing
Policy # WES-2020.001

Effective Date: June 17, 2020
Replaces the Policy on Chemistry Proficiency Testing # WES-14.001

1.0 INTRODUCTION

1.1 The Massachusetts Department of Environmental Protection (the Department or MassDEP) regulations for the certification and operation of environmental analysis laboratories at 310 CMR 42.04(3) state that a laboratory applying for certification as an environmental analysis laboratory must satisfactorily analyze samples from a proficiency testing (PT) program approved by the Department for the matrices, disciplines, and categories for which certification is sought. 310 CMR 42.10(1) states that a laboratory wishing to maintain certification must satisfactorily analyze samples from a PT program administered or approved by the Department.

1.2 This policy outlines the requirements for providers of and participants in a chemistry PT program. The Department reserves the right to determine acceptable performance of a laboratory in a PT program which includes, but is not limited to, the elements contained in this policy.

2.0 GENERAL REQUIREMENTS

2.1 As specified in 310 CMR 42.08(5)(a)8, in order to meet the minimum standards for certification, laboratories must use acceptable analytical methods. The acceptable methods are those defined or referenced in current regulations at 40 CFR Part 141, 40 CFR Part 143, 40 CFR Part 136, and 310 CMR 22.00 for the environmental matrix being tested. All samples, including PT samples, that are or that may be used for certification purposes must be analyzed using approved methods only. All PT samples are to be analyzed and the results reported in a manner consistent with the analysis and reporting requirements of compliance samples and any other samples analyzed according to the requirements of 310 CMR 42.00.

2.2 A laboratory must obtain PT samples from PT providers meeting the criteria listed in Section 5.0 of this policy. A laboratory may use more than one PT provider in order to obtain PT samples for all analytes and methods for which it is certified or is seeking certification by the Department. Although this policy requires a laboratory to analyze a PT sample for each analyte by each method the laboratory uses to test for that analyte, a laboratory is not required to analyze a separate PT sample for each method. The same PT sample may be used for one or more methods. The laboratory must have available and retain for five years all of the raw data, including instrument printouts and calibration data, for all PT analyses and the associated quality control analyses conducted by all methods.

2.3 Except when otherwise specified, all PT studies being used to obtain or maintain certification must meet the criteria set by the National Environmental Laboratory Accreditation Program (NELAP) and implemented by the Proficiency Testing Provider Accreditor (PTPA) or its successor body for accredited PT providers. Discharge Monitoring Report-Quality Assurance (DMRQA) studies are not acceptable.

2.4 Before the close of a PT study, a laboratory must arrange with the PT provider for the study results to be sent directly from the PT provider to the MassDEP Laboratory Certification Program (LCP) before or at the same time that results are released to the laboratory. With the exception of those being used to obtain certification for the first time for a specific analyte/method within a matrix, or to regain certification following revocation, PT study results must be submitted to the LCP by

December 31st of the same calendar year in which the test was performed to meet the requirements of this policy.

2.5 A laboratory must not send any PT sample, or a portion of a PT sample, to another laboratory for any analysis for which it is certified or seeking certification.

2.6 A laboratory must not communicate with any other laboratory (including laboratories within the same company) or person regarding the results obtained from the analysis of the PT sample, before the PT provider releases the study results.

2.7 To obtain or maintain certification for haloacetic acids in potable water, volatile halocarbons in non-potable water, volatile aromatics in non-potable water, semi-volatile acid extractables in non-potable water, and semi-volatile base neutrals in non-potable water, a laboratory must achieve acceptable analytical results for at least 80% of the analytes contained in the PT sample.

2.8 To obtain or maintain certification for volatile organic compounds (regulated and unregulated) in potable water, a laboratory must achieve acceptable analytical results for at least 80% of all volatile organic compounds (regulated and unregulated) contained in the PT sample, including at least 80% of the regulated volatile organic compounds.

2.9 To obtain or maintain certification for trihalomethanes, acceptable results must be obtained from the analysis of each analyte included in the trihalomethane PT sample (i.e., chloroform, dichlorobromomethane, dibromochloromethane, and bromoform). A laboratory that fails to satisfactorily analyze one or more of these analytes must correctly analyze all four analytes in a follow-up trihalomethane PT study.

2.10 To obtain or maintain radiochemistry certification for uranium in potable water using EPA Method 200.8, a laboratory must achieve acceptable analytical results in either a Water Supply radiochemistry PT sample or a Water Supply metals PT sample.

2.11 To obtain or maintain certification for the analysis of perchlorate in potable water, the laboratory must achieve acceptable results for a Department-approved whole-volume low-level sample prepared in a mixed common anion solution consisting of chloride, sulfate, and carbonate, per EPA Method 314.0, adjusted to a conductivity of 500 µS/cm at 25°C.

2.12 To obtain or maintain certification for the analysis of perchlorate in non-potable water, the laboratory must achieve acceptable results from the analysis of a wastewater (Water Pollution) PT study acceptable to the Department.

2.13 To obtain or maintain certification for the analysis of per- and polyfluoroalkyl substances (PFAS), the laboratory must achieve acceptable results for each analyte included in the PT evaluation that will be reported by the laboratory. A laboratory that fails to satisfactorily analyze one or more analytes included in the PT sample, must correctly analyze any failed analyte(s) in a follow-up PT study.

At a minimum, the following analytes must be included in the PT evaluation:

Perfluoroheptanoic acid (PFHpA)

Perfluorohexanesulfonic acid (PFHxS)

Perfluorononanoic acid (PFNA)

Perfluorooctanesulfonic acid (PFOS)

Perfluorooctanoic acid (PFOA)

Perfluorodecanoic acid (PFDA)

3.0 REQUIREMENTS FOR LABORATORIES CURRENTLY CERTIFIED

3.1 A laboratory seeking to maintain certification must successfully analyze at least one PT sample in a calendar year for each certified analyte by each method the laboratory uses to test for the analyte. The laboratory must participate in a Water Supply (WS) PT study for potable water analytes and a Water Pollution (WP) study for non-potable water analytes.

3.2 A laboratory that reports no PT study data in a calendar year for an analyte/method for which it is certified will have its certification status downgraded to "Not Certified" for that analyte/method.

3.3 A laboratory that fails a PT study for an analyte/method must take corrective action, report to the LCP the corrective action taken, and participate, before the end of the calendar year, in a second PT study meeting the criteria of this policy. A laboratory failing the second PT study will have its certification status downgraded to "Not Certified" for that analyte/method, pursuant to 310 CMR 42.12(3)(a)3.

3.4 A laboratory's failure of two PT studies in a row indicates the corrective action taken earlier by the laboratory was inadequate and may signal major problems with the laboratory's system for testing that analyte or group of analytes. Further corrective action must be taken by the laboratory and documentation of that action sent to the LCP for approval before the laboratory may participate in another PT study. After reviewing the corrective action documentation submitted by a laboratory (now "Not Certified") and prior to approving its participation in a new PT study, the LCP may conduct an on-site inspection/audit of the laboratory, may recommend training for laboratory staff, and/or may recommend that the laboratory obtain third-party assistance in chemistry laboratory operation.

3.5 A laboratory that fails a PT study for an analyte/method, and does not take corrective action and successfully participate in a second PT study before the end of the calendar year, will have its certification status downgraded to "Not Certified" for that analyte/method, pursuant to 310 CMR 42.12(3)(a)3).

3.6 A laboratory that has had its certification status downgraded to "Not Certified" status must pass two PT studies of the three most recent studies it has participated in to regain certified status. These studies must be separated by at least 15 days as determined by the analysis dates and the study closing dates.

3.7 If a laboratory submits to the LCP results of more than one PT study per analyte/method in a matrix in a calendar year, the above certification rating scheme and criteria shall apply to all studies (i.e., a laboratory submitting results of one PT study must pass one study; a laboratory submitting results of two studies must pass two studies, etc.).

3.8 Participation in a PT study includes the submittal of PT study results directly from the provider to the LCP before or at the same time that results are released to the laboratory. With the exception of those being used to regain certification following revocation, PT study results must be submitted to the LCP by December 31st of the same calendar year in which the test was performed to meet the requirements of this policy.

4.0 REQUIREMENTS FOR LABORATORIES SEEKING INITIAL CERTIFICATION OR MODIFICATION OF CERTIFICATION BY ADDING NEW CATEGORIES

4.1 A laboratory seeking initial certification must obtain a laboratory identification number from the U.S. EPA.

4.2 In order to be considered for certification, a laboratory must pass two PT studies for each requested analyte and method in a matrix within the three most recent (i.e., within the past eighteen months) study rounds attempted for each analyte/method for which the laboratory is requesting certification as part of the application process. The PT studies must be separated by at least 15 calendar days as determined by the analysis dates and the study closing dates.

5.0 REQUIREMENTS FOR PT PROVIDERS

5.1 The PT provider must be accredited by and continue to meet the requirements of the NELAP PTPA or its successor body. The list of providers, including the analytes and matrices for which they are accredited, is available at: http://www.nelac-institute.org/ptproviders.php.

5.2 Review of Providers: MassDEP reserves the right to review each provider's PT program and withdraw approval if these program requirements are not met or for any other factors that MassDEP deems relevant to the determination of the ability of the provider to operate a satisfactory PT service.

NOTE: It must be emphasized that a laboratory's certification status is determined not only by its performance in acceptable proficiency tests but by a combination of criteria including qualifications of personnel, its performance in inspections, and, in the case of laboratories located outside of Massachusetts, the status of its certification from its resident state. For more information about the Massachusetts laboratory certification process and requirements, consult the MassDEP regulations for the *Certification and Operation of Environmental Analysis Laboratories* at 310 CMR 42.00.

Approved:

June 17, 2020

Oscar C. Pancorbo, Ph.D. Date
Division and Station Director
Division of Environmental Laboratory Sciences
Senator William X. Wall Experiment Station

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