

Proficiency Testing Guidance

Proficiency testing allows state regulators to assess the quality of data reported by WWTFs and Significant Industrial Users (SIUs). Having staff test unknown samples that are graded by a Proficiency Test Provider (PTP) maintains an important level of Quality Control on self-reported data.

All major WWTFs (>1 MGD), SIUs and facilities with permit conditions that require proficiency testing must complete proficiency tests for all analytes that are listed in the effluent limit tables of their NPDES or Pretreatment permit, are analyzed in-house, and included in Table 1 of this guidance.

Process for EPA DMR-QA Study Participants:

1. The EPA will reach out to study participants in April with a packet containing instructions for completing the proficiency testing and the deadlines.
2. By the due date listed in the packet, facilities must inform the Wastewater Program of any changes in address or contact information by either emailing the program or mailing the form included in the packet.
 - a) Email: send email to anr.wsmdwastewater@vermont.gov with the subject line of “Address Verification” and the facility’s NPDES permit number. The email should state “no changes to address or contact information” or include any changes to the company name, contact name/title, email address, mailing address, and/or phone number.
 - Please note, this guidance differs from that provided in the EPA DMR-QA study packet for internal organizational purposes. We ask that facilities follow this alternate guidance.
 - b) Mail: send the completed NPDES Permittee Address Verification Form from the packet to:

Michelle Kolb
Davis 3, 1 National Life
Montpelier, VT 05620-3522
3. Proficiency testing samples must be ordered from an accredited PTP (Table 2). Contact a PTP early in order to ensure that the appropriate tests are conducted, and the results are submitted to the Wastewater Program by the deadline listed in the EPA DMR-QA study packet.

PTPs also sell QC check samples – these are not proficiency tests (though can be helpful practice tests). Make sure to order the correct type of test.

4. The PTP will send unknown samples for your lab staff to analyze. Make sure to

complete these analyses in a timely manner using the same sample methods and equipment as required by your NPDES permit.

5. Record test results and send to the PTP by the date specified in the EPA DMR-QA study packet.
6. The PTP will send graded results to you as either *Acceptable* or *Not Acceptable*. If any parameters receive a *Not Acceptable* grade, you must order additional samples for analysis as soon as possible in order to meet the EPA DMR-QA study deadline for passing proficiency testing and submitting all results. Contact the Wastewater Program at anr.wsmdwastewater@vermont.gov as soon as possible with the subject of “Proficiency Testing Results” and your NPDES permit number if you receive a *Not Acceptable* result. You may also contact Elizabeth Walker (ewalker@vtruralwater.org) or Wayne Graham (wgraham@vtruralwater.org) at Vermont Rural Water Association for technical assistance when conducting the retest.
 - a) In 2022, the Deadline to submit corrective action reports and retest results for EPA-DMR-QA is November 4th
7. By the date specified in the EPA DMR-QA study packet, submit a .pdf of all proficiency test results, including *Not Acceptable*, via email to the Wastewater Program at anr.wsmdwastewater@vermont.gov with a subject of “Proficiency Testing Results” and your NPDES permit number.

Process for Permit Required Proficiency Testing:

1. Proficiency test samples must be ordered from an accredited PTP (Table 2). Contact a PTP early in order to ensure that the appropriate tests are conducted, and the results are submitted to the Wastewater Program by December 31.

PTPs also sell QC check samples – these are not proficiency tests. Make sure to order the correct type of test.
2. The PTP will send unknown samples for your lab staff to analyze. Make sure to use the same sample methods and equipment as required by your NPDES/Pretreatment permit.
3. Record test results and send to the PTP for grading. Be sure to provide enough for grading before the results are due to be submitted to the Wastewater Program.
4. The PTP will send graded results to you as either *Acceptable* or *Not Acceptable*. If any parameters receive a *Not Acceptable* grade, you must order additional samples for analysis as soon as possible in order to meet the deadline for passing proficiency testing and submitting all results. Contact the Wastewater Program at anr.wsmdwastewater@vermont.gov as soon as possible with the subject of

“Proficiency Testing Results” and your NPDES/Pretreatment permit number if you receive a *Not Acceptable* result. You may also contact Elijah Lemieux (elemieux@vtruralwater.org) or Wayne Graham (wgraham@vtruralwater.org) at Vermont Rural Water Association for technical assistance when conducting the retest.

- a. Facilities with permit-required proficiency testing must submit results by December 31
5. By the applicable due date, submit a .pdf of the proficiency test results via email to the Wastewater Program at anr.wsmdwastewater@vermont.gov with a subject of “Proficiency Testing Results” and your NPDES/Pretreatment permit number.

Table 1 -Chemistry/Microbiology Analyte Checklist

Microbiology

E. coli., MF or MPN
 Fecal Coliform, MF or MPN
 Total Coliform, MF or MPN

Demands

5-day BOD
 5-day Carbonaceous BOD
 COD
 TOC

Minerals

Alkalinity, total (CaCO₃)
 Chloride
 Fluoride
 Hardness, total (CaCO₃)
 Specific conductance (25° C)
 Sulfate
 Total Dissolved Solids (180° C)

Trace Metals

Aluminum
 Antimony
 Arsenic
 Barium
 Beryllium
 Cadmium
 Chromium, total
 Chromium, hexavalent
 Cobalt
 Copper
 Iron
 Lead
 Manganese
 Mercury
 Mercury (Low Level)
 Molybdenum
 Nickel
 Selenium
 Silver
 Thallium
 Vanadium
 Zinc

Nutrients

Ammonia as N
 Nitrate as N
 Nitrite as N
 Orthophosphate as P
 Total Kjeldahl-Nitrogen as N
 Total Phosphorus as P

Misc. Analytes

Non-Filterable Residue (TSS)
 Oil and Grease
 pH
 Total Cyanide
 Total Phenolics (4-AAP)
 Total Residual Chlorine
 Total Residual Chlorine (Low Level)
 Settleable Solids
 Turbidity

Table 2 - Accredited Proficiency Testing Providers

The following providers are accredited by A2LA or ANAB. A2LA and ANAB have each been designated a Proficiency Testing Oversight Body (PTOB)/Proficiency Testing Provider Accreditor (PTPA) by The NELAC Institute (TNI). Find the following PT Providers on the internet at: [http:// www.nelac-institute.org/content/NEPTP/ptproviders.php](http://www.nelac-institute.org/content/NEPTP/ptproviders.php).

NELAC-Accredited Provider	Chem	Micro	WET
Phenova Inc., Golden, CO (866) 942-2978 info@phenova.com www.phenova.com	X	X	X
Advanced Analytical Solutions, LLC, Parkersburg, WV Fred Anderson (304) 485-6325 Fred@advancedqa.com www.advancedqa.com	X	X	
NSI Lab Solutions, Raleigh, NC Mr. Mark Hammersla (800) 234-7837 mark.hammersla@nsilabsolutions.com www.nsilabsolutions.com	X	X	
Environmental Resource Associates (ERA), Golden, CO (800) 372-0122 interlabgroup@eraqc.com ; info@eraqc.com www.eraqc.com	X	X	X
New York State Department of Health Wadsworth Center, Albany, NY Amy C. DeMarco (518) 476-1398 dehspt@health.ny.gov www.wadsworth.org/programs/ehs/pt	X	X	
MilliporeSigma, Laramie, WY (800) 576-5690 PTService@milliporesigma.com https://www.sigmaaldrich.com/pt	X	X	X
Absolute Standards, Inc., Hamden, CT Mr. Stephen Arpie (203) 281-2917 or (800) 368-1131 stephen@absolutestandards.com www.absolutestandards.com	X	X	