



# Laboratory Accreditation Advisory Committee Meeting

Virtual Meeting

July 15, 2021

Tom Wolf, Governor

Patrick McDonnell, Secretary

# Meeting Agenda

<b>9:00</b>	<i>Call to Order and Attendance</i> .....	Ms. Steinman Chair
<b>9:05</b>	<i>Review and Approval of 12/1/2020 Meeting Minutes</i> .....	Committee
<b>9:10</b>	<i>Welcome and Greeting</i> .....	Annmarie Beach LAP Chief
<b>9:30</b>	<i>Discussion</i> .....	
	<ul style="list-style-type: none"><li>• <i>Legionella Accreditation Program</i></li><li>• <i>PA MDL levels for PFAS</i></li></ul>	Dwayne Burkholder  Annmarie Beach
<b>12:00</b>	<i>Adjourn</i>	

# Legionella

## Status of Legionella Accreditation Program

# Legionella

- *Legionella* bacteria can cause a serious type of pneumonia called **Legionnaires' disease**.  
Legionella bacteria can also cause a serious illness called Pontiac fever (CDC website)
- Certain people are at increased risk
  - Current or former smoker
  - Chronic lung disease (COPD)
  - Weakened immune system (cancer, diabetes)

# Legionella

- Naturally, *Legionella* live in fresh water, rarely cause disease.
- Man-made structures: *Legionella* could grow if water not properly treated.
- Legionnaires' disease caused by breathing in droplets of water containing *Legionella*.
- In general, not spread person-to-person.

# Legionella

- *Legionella* genus consists of over 50 species and 64 serogroups.
- *L. pneumophila* (SG1-15) is implicated in >90% of cases of Legionnaires' disease.
- *L. pneumophila* serogroup 1 (SG1) is implicated in >80% of cases of Legionnaires' disease.

# Legionella

- Currently *Legionella* regulated under SWTR with MCL goal of zero organisms [EPA].
- Through treatment technique and maintaining residual chlorine level. Not Testing.
- Available Test Methods?
  - Culture Based Methods
  - IDEXX Legiolert©
  - qPCR Based Methods

# Legionella

- Culture Based Methods
  - CDC Culture Method (January 2005)
  - ISO 11731
  - Standard Methods 9260 J
  - “Gold Standard”
  - Determine *Legionella* spp. (presumptive)
  - Determine species and serotype (confirm) including *L. pneumophila* SG1
  - Requires analytical expertise



# Legionella

- Culture Based Methods (cont.)
  - 7-14 days
  - Interference from non-*Legionella* bacteria
  - Can observe/isolate bacteria

# Legionella

- IDEXX Legiolert©
  - Potable Water and Non-Potable Water Protocols
  - Detects *L. pneumophila* only
  - 7-day test
  - Easy to use
  - No procedure for serotyping included
  - Unable to observe bacteria
  - False positive rate?

# Legionella

- qPCR Based Methods
  - Ability to detect organisms that are not culturable
  - Rapid detection, 2-24 hours
  - *L. pneumophila* specificity relatively high
  - *Legionella spp.* specificity not as high
  - Unable to determine live from dead (viability)
  - Unable to determine serotype

# Legionella

- We are currently evaluating offering an accreditation program for Legionella testing.
- What are we looking at?
  - Purpose: Surveillance vs Investigation
  - Criteria: P/A, Enumeration, % Positivity
  - Sample Collection and Handling Protocols
  - Test Methods/Level of Identification
  - Proficiency Testing

# PFAS Reporting Limits

## Status of PA Drinking Water Reporting Limits for PFAS

# DW Reporting Limits for PFAS

- Status of setting PA reporting limits for PFAS
- Research and investigation of reporting limits for PFAS
- Proposed reporting limits by the EPA

# UCMR - 5

Contaminant	Chemical Abstract Service Registry Number (CASRN)	Minimum Reporting Level	Sample Point Location <sup>1</sup>	Analytical Methods
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.005 µg/L	EPTDS	EPA Method 533
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.002 µg/L	EPTDS	EPA Method 533
4,8-dioxa-3H-perfluorononanoic acid (ADONA) <sup>2</sup>	919005-14-4	0.003 µg/L	EPTDS	EPA Method 533
hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	0.005 µg/L	EPTDS	EPA Method 533
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	0.02 µg/L	EPTDS	EPA Method 533
perfluorobutanoic acid (PFBA)	375-22-4	0.005 µg/L	EPTDS	EPA Method 533

# UCMR - 5

perfluorobutanesulfonic acid (PFBS)	375-73-5	0.003 µg/L	EPTDS	EPA Method 533
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	0.005 µg/L	EPTDS	EPA Method 533
perfluorodecanoic acid (PFDA)	335-76-2	0.003 µg/L	EPTDS	EPA Method 533
perfluorododecanoic acid (PFDoA)	307-55-1	0.003 µg/L	EPTDS	EPA Method 533
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	113507-82-7	0.003 µg/L	EPTDS	EPA Method 533
perfluoroheptanesulfonic acid (PFHpS)	375-92-8	0.003 µg/L	EPTDS	EPA Method 533



# UCMR - 5

perfluoroheptanoic acid (PFHpA)	375-85-9	0.003 µg/L	EPTDS	EPA Method 533
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	0.003 µg/L	EPTDS	EPA Method 533
perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.003 µg/L	EPTDS	EPA Method 533
perfluorohexanoic acid (PFHxA)	307-24-4	0.003 µg/L	EPTDS	EPA Method 533
perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	0.004 µg/L	EPTDS	EPA Method 533
perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	0.003 µg/L	EPTDS	EPA Method 533

# UCMR - 5

perfluorononanoic acid (PFNA)	375-95-1	0.004 µg/L	EPTDS	EPA Method 533
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	0.005 µg/L	EPTDS	EPA Method 533
perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.004 µg/L	EPTDS	EPA Method 533
perfluorooctanoic acid (PFOA)	335-67-1	0.004 µg/L	EPTDS	EPA Method 533
perfluoropentanoic acid (PFPeA)	2706-90-3	0.003 µg/L	EPTDS	EPA Method 533
perfluoropentanesulfonic acid (PFPeS)	2706-91-4	0.004 µg/L	EPTDS	EPA Method 533

# UCMR - 5

Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.002 µg/L	EPTDS	EPA Method 533
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	0.005 µg/L	EPTDS	EPA Method 537.1
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	0.006 µg/L	EPTDS	EPA Method 537.1
perfluorotetradecanoic acid (PFTA)	376-06-7	0.008 µg/L	EPTDS	EPA Method 537.1
perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.007 µg/L	EPTDS	EPA Method 537.1

# Status of PFAS Reporting Limits

- Evaluation of reporting limits for PFAS from PA accredited labs
- Evaluation of instrument capability
- Alignment with proposed EPA reporting limits for PFAS



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL PROTECTION



# Contact the Laboratory Accreditation Program:

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**[Visit our Website](#)**