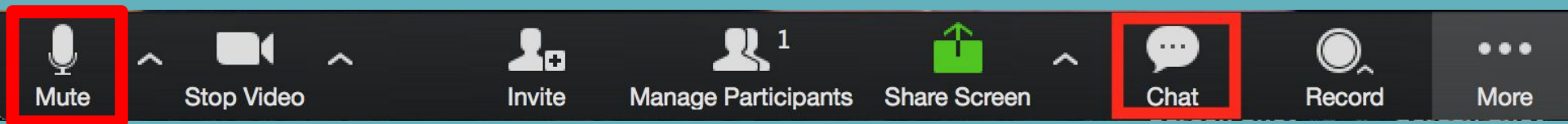


Virtual Organizing Training Series

Understanding Technical Documents
February 17, 2021



Tech overview



Mute when you're not speaking
Grid view for video
Chat questions and comments
This is being recorded

Agenda

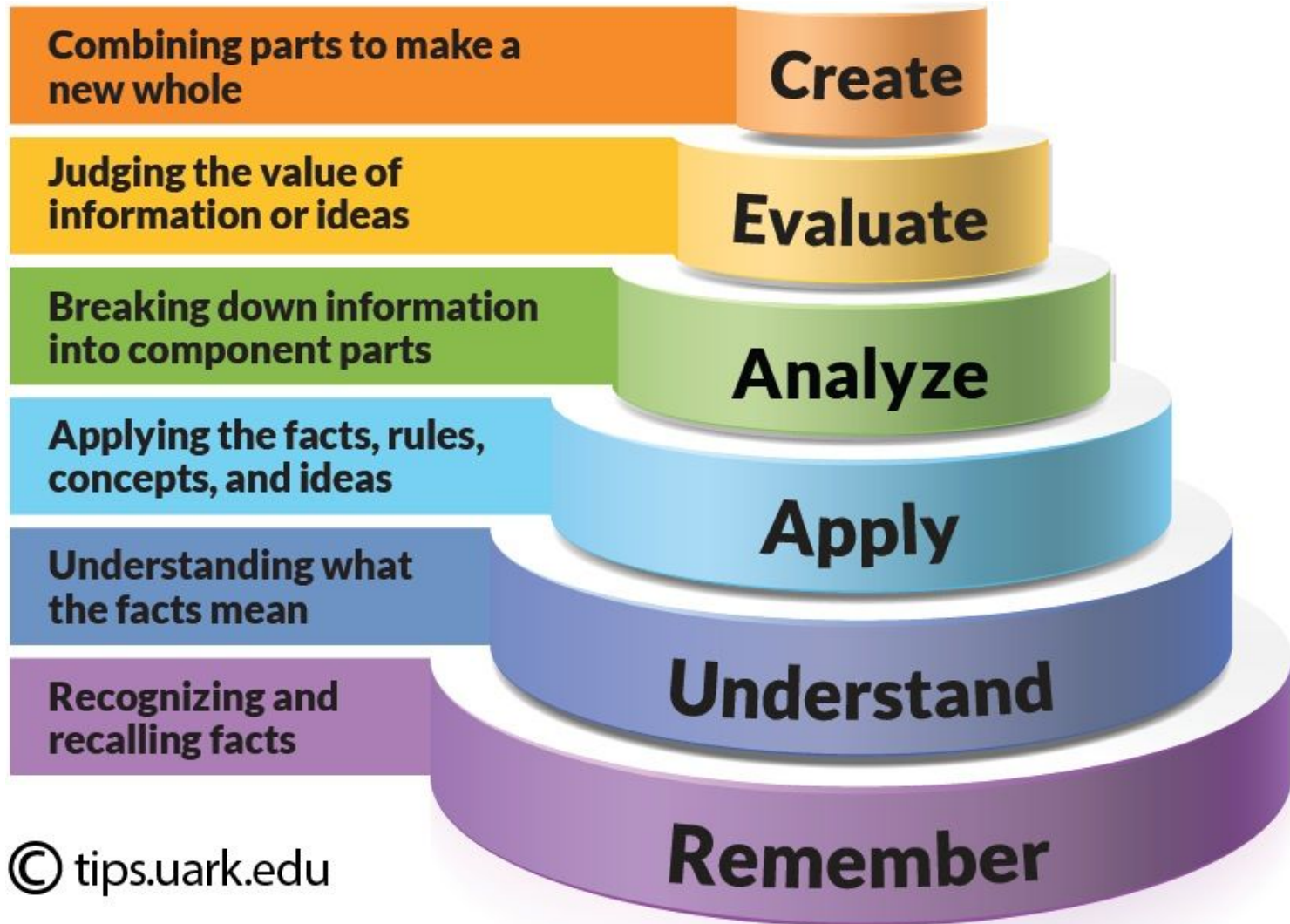
- Welcome, Introductions, Agenda Review, Goals
 - About this Webinar Series
 - Participant Survey
- Tips
- Tools
- Evaluation and Close

Goals

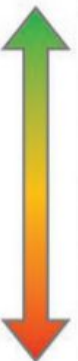
- To share tips for understanding technical documents
- To share some tools or ideas that may be helpful for you understanding technical documents in your campaign



Bloom's Taxonomy



Bloom's Taxonomy- applied to environmental health



Level of EHL/EHS Topic	Breast Cancer	Autism	Asthma	Environ. Justice	Pesticide Exposure	Nano-material	Lead in Water
Create							
Evaluate							
Analyze							
Apply							
Understand							
Recognize							

Figure 2. Conceptual model of environmental health literacy adapted from Bloom (1956), representing the potential for different levels of EHL across various environmental health science topics.

Finn and O'Fallon. The Emergence of Environmental Health Literacy. *Environmental Health Perspectives* 2017

About the virtual training webinar series

Holding Group Meetings Online
Social Media 101
Holding Online Events and
Actions
Messaging: Writing Strong
Emails and Petitions
Applying for grants
And more!



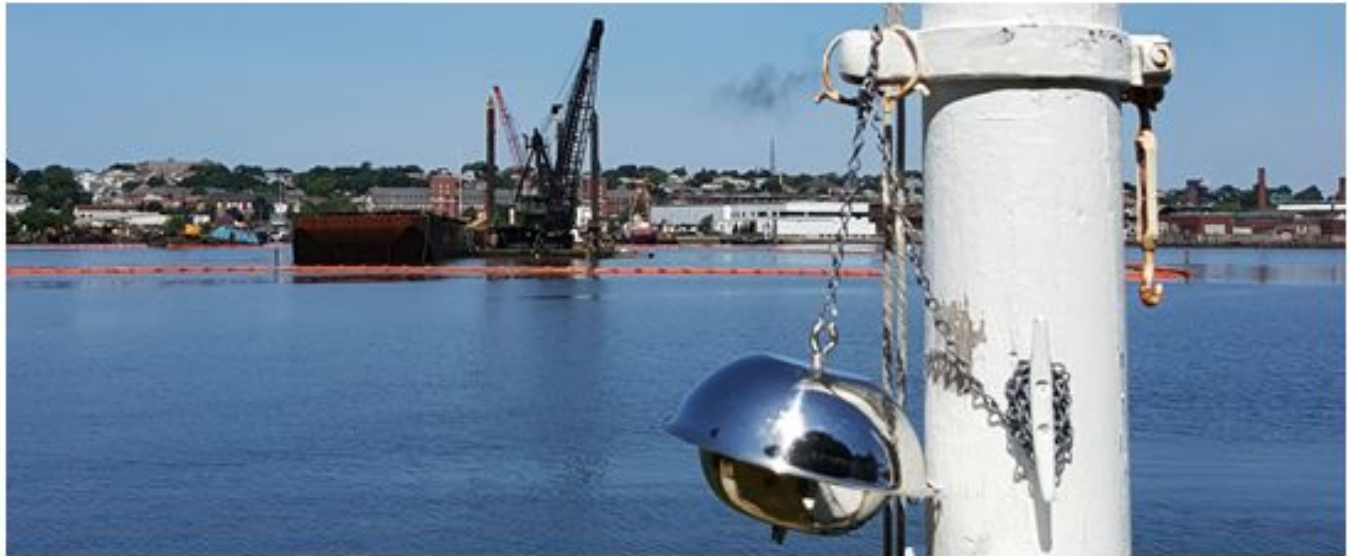
Participant Survey:

- **What technical documents you interact with?**
- **How comfortable are you interpreting technical documents?**



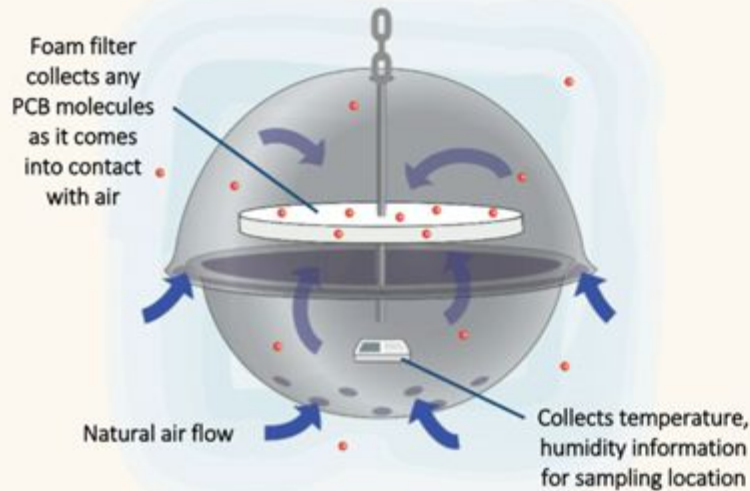
A Story

Are PCBs from the harbor in our air?
PCB Monitoring in Ambient Air around
New Bedford Harbor, MA.



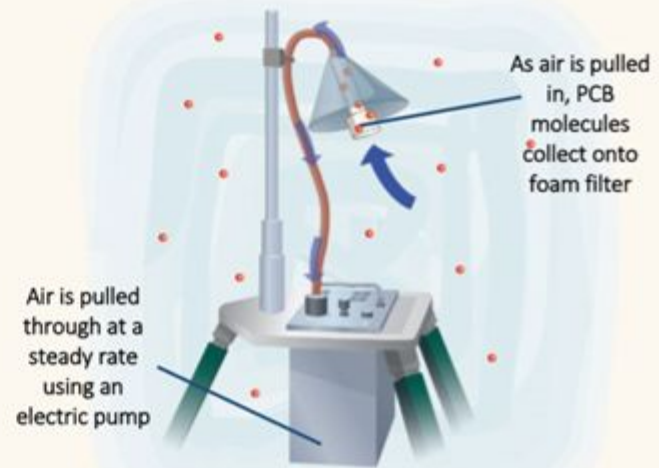
Comparing New Bedford Harbor PCB Air Monitoring Methods from EPA and SRP

SRP sampling method

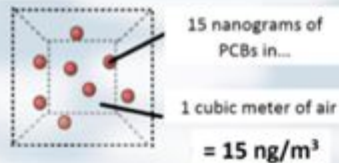


- **Passive sampling:** Air enters through openings in the chamber and circulates within, depending on the **natural air flow** in the surrounding environment. PCBs in that air are collected on the foam.
- Samplers hung at 4-6 ft height (typical breathing height)
- To find the **concentrations of PCBs**, the amount of collected PCBs (nanograms) are divided by the *estimated* amount of air that passed through the samplers (cubic meter), over the course of the 6 week sampling period (42 days).

EPA sampling method



- **Active sampling:** Using an electric pump, air is pulled through the sampler at a **constant and measured** rate. PCBs stick to the same foam filter material as in the passive sampling method.
- Samplers mounted at 4-6 ft height (typical breathing height)
- To find the **concentrations of PCBs**, the amount of collected PCBs (nanograms) are divided by the *known* volume of air (cubic meter) that was pulled through the sampler, over the course of the 24-hour sampling period (1 day).



In both cases, the PCBs collected onto the foam get sent to a lab, where the amounts and types of PCB molecules, called congeners, are measured using techniques including gas chromatography and mass spectrometry.

Note: 1 nanogram is a very small unit of measure. 1 nanogram = 1 billionth of a gram.

Statistics for Action

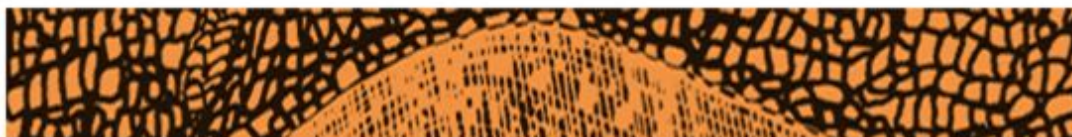
03.0032795.29 No.: 0910-00086 mS/cm 0.337 mg .885
EPA 8260 CH₄%630 <5 70-130 % R NO DET< 0.369 0.406 -33 *C
10/22/2009 CH₄%630 <5 70-130 % R NO DET< 0.369 0.406 -33 *C
03.0032795.29 No.: 0910-00086 mS/cm 0.337 mg .885
EPA 8260 CH₄%630 <5 70-130 % R NO DET< 0.369 0.406 -33 *C
10/22/2009 CH₄%630 <5 70-130 % R NO DET< 0.369 0.406 -33 *C

Using SfA

All Materials

Data Resources

About SfA



**Soil Quality: Digging
into the Dirt**



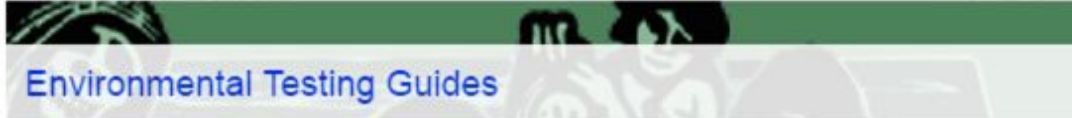
**Hazardous Waste:
Containing the Danger**



**Water Quality: Read
Before You Drink**



**Air Quality: Know What
You're Breathing**



[Environmental Testing Guides](#)

**Guide to State Cancer
Profiles**

Click on the blue arrows to preview more *Statistics for Action* materials.

<https://sfa.terc.edu/>

Sampling: July – November 2015

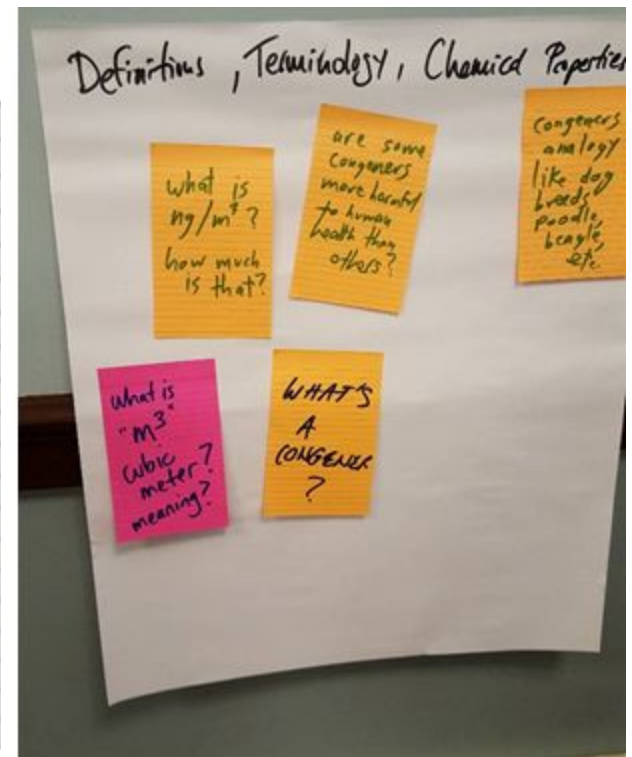
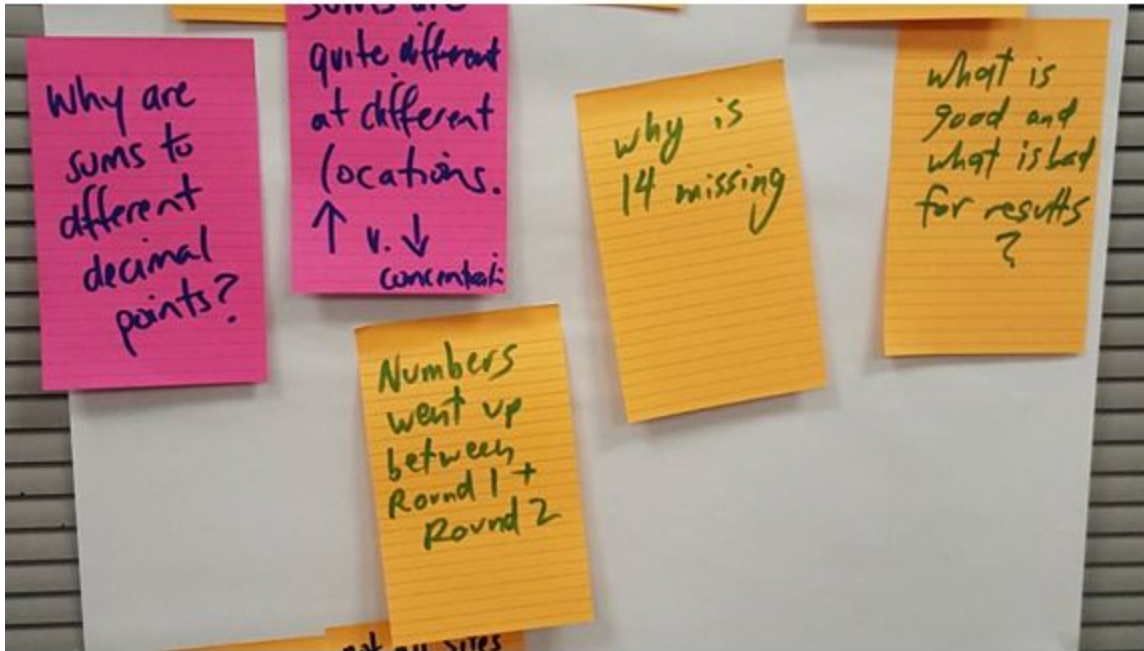
February 4, 2016: First Look at Data Workshop

February 18, 2016: Second Look at Data Workshop

July 6, 2016: All Results Mailing



A group of people are gathered around a table, looking at and writing on documents. A woman in a red cap and glasses is visible, along with a laptop and a water bottle on the table.



Example Questions:

What is mg/m^3 ? What is a cubic meter?

Why are some PCBs low and some high?

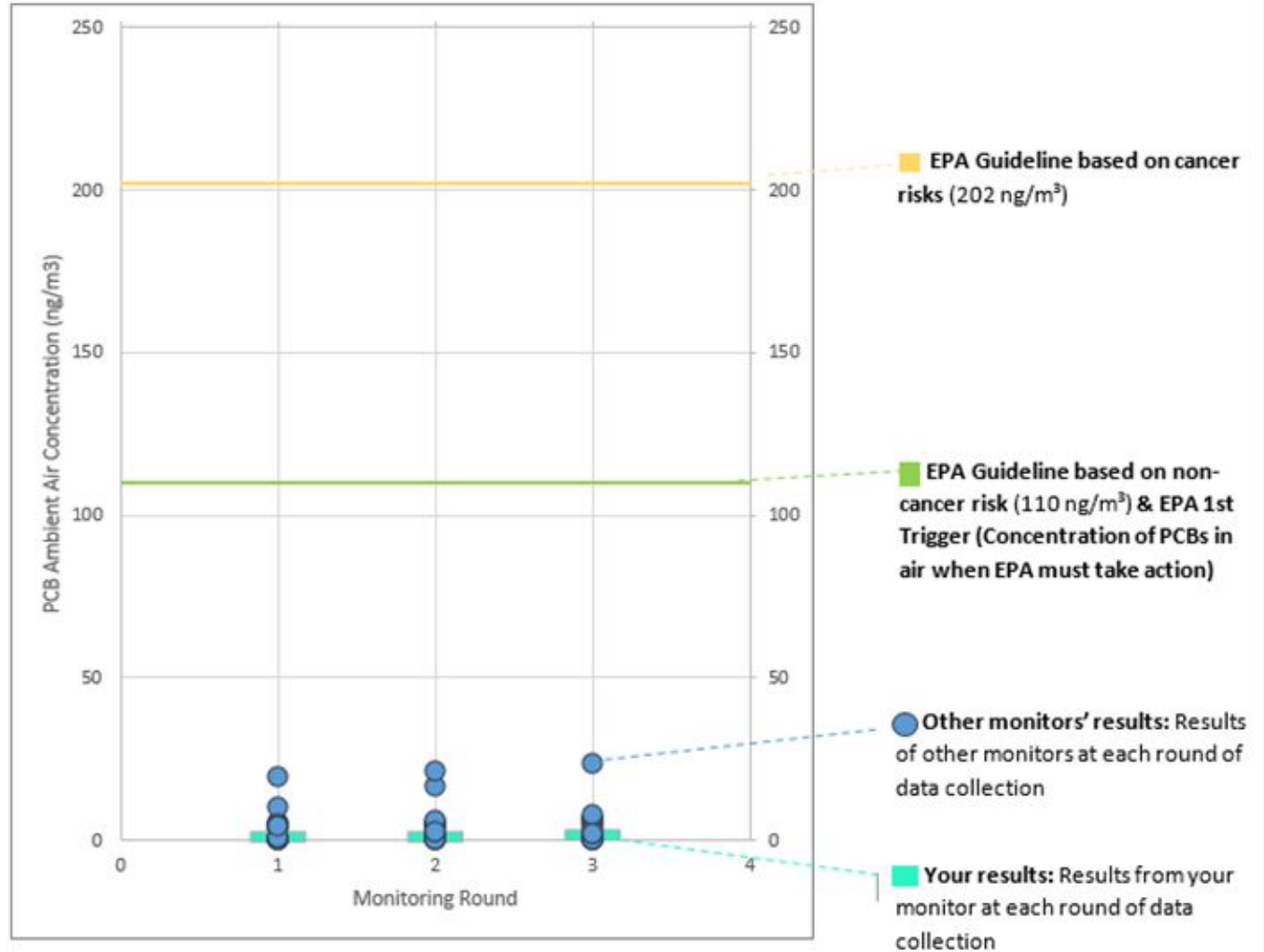
Did numbers go up over time?

Are the numbers higher in some locations than others?

How do these numbers compare with regulations?

Location #1

“What were the results at my location?”



Tips

1. Know your goals
2. Become the expert

Project Name: 3 NYES CORNER ROAD
Project Number: Not Specified

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

WG1448186-2: The LCS/LCSD recoveries, associated with L2055257-01, are above the acceptance criteria for 4,8-dioxa-3h-perfluorononanoic acid (adona) (144% LCS only) and perfluorohexadecanoic acid (pfhxda) (218%/214%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

WG1448186-4: The MS recovery, performed on L2055257-01, is outside the acceptance criteria for perfluorohexadecanoic acid (pfhxda) (222%).

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE
1235 CENT
PRESQUE
(207) 764-04

Tip 1: Know your goals!

- Know why you want to interpret the technical document
- Work backwards from your campaign goal:
 - What is your campaign goal, priority decision-maker and strategy?
 - What is your goal for interpreting technical documents?



What We Can Learn from Exposure Assessments



WHAT WE **CAN** LEARN



- ✓ How much **PFAS** are in the **blood and urine** of participants



- ✓ The **range of PFAS levels** we might expect to see in **untested people** in each community



- ✓ How **PFAS levels** in communities exposed to PFAS through drinking compare to the **general U.S. population**



- ✓ What **environmental factors** might affect **PFAS levels** in people's bodies



WHAT WE **CANNOT** LEARN



- ✗ Whether or not the **PFAS levels** in someone's **blood or urine** **will make them sick** now or later in life



- ✗ Whether or not a **health condition** was **caused by PFAS exposure**



- ✗ Exactly **how or where** someone was **exposed to PFAS**



- ✗ Exactly **when or how long** the **PFAS exposure** lasted

Tip 2: Become the expert!

Take time to understand the information

- Talk it out
- Visualize the material
- Know your numbers
- Keep a running list of questions you'll need help with



Talk it out

- What are the contaminants or chemicals of greatest concern?
- What are the lowest and highest levels for each contaminant?
- Where are the lowest and highest levels? Are there any hotspots?
- Are there any trends in the test results across the site or over time?
- What additional information do you want to know?
- What is the health or safety level of this contaminant?
- Who set that level?
- What is the legal standard for this contaminant?
- Who set that level?



Know your numbers

1 ppt is 1 part per 1,000,000,000,000

This is thirty seconds out of every million years

Symbol	Prefix	Multiplication Factor	
E	exa	10^{18}	1,000,000,000,000,000,000
P	peta	10^{15}	1,000,000,000,000,000
T	tera	10^{12}	1,000,000,000,000
G	giga	10^9	1,000,000,000
M	mega	10^6	1,000,000
k	kilo	10^3	1,000
h	hecto	10^2	100
da	deka	10^1	10
d	deci	10^{-1}	0.1
c	centi	10^{-2}	0.01
m	milli	10^{-3}	0.001
μ	micro	10^{-6}	0.000,001
n	nano	10^{-9}	0.000,000,001
p	pico	10^{-12}	0.000,000,000,001
f	femto	10^{-15}	0.000,000,000,000,001
a	atto	10^{-18}	0.000,000,000,000,000,001

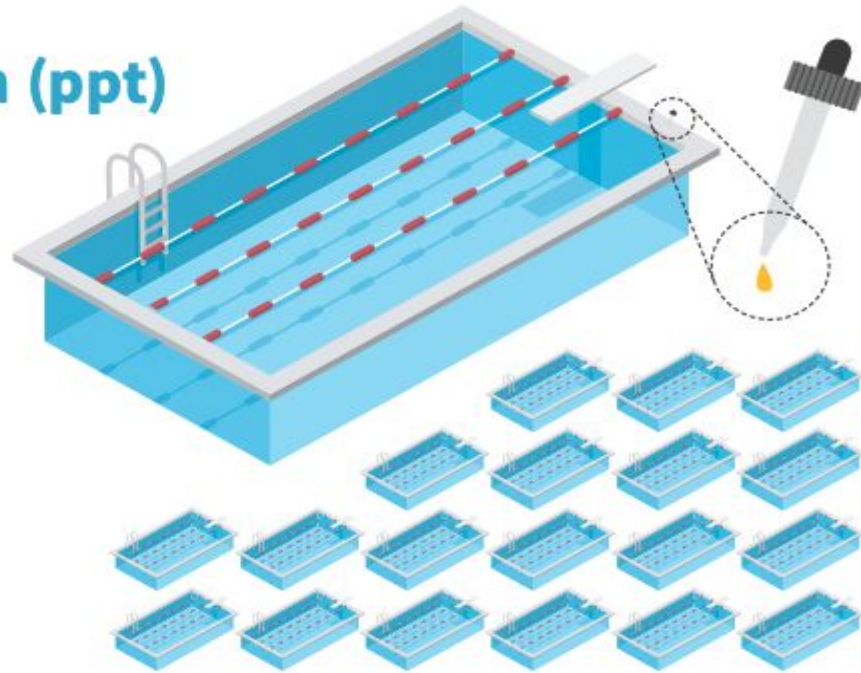


Visualize your material

1 part per trillion (ppt)

**IS EQUIVALENT TO A
SINGLE DROP OF
WATER IN**

**20 olympic-sized
swimming pools**



➤ PFOA (Perfluorooctanoic acid)

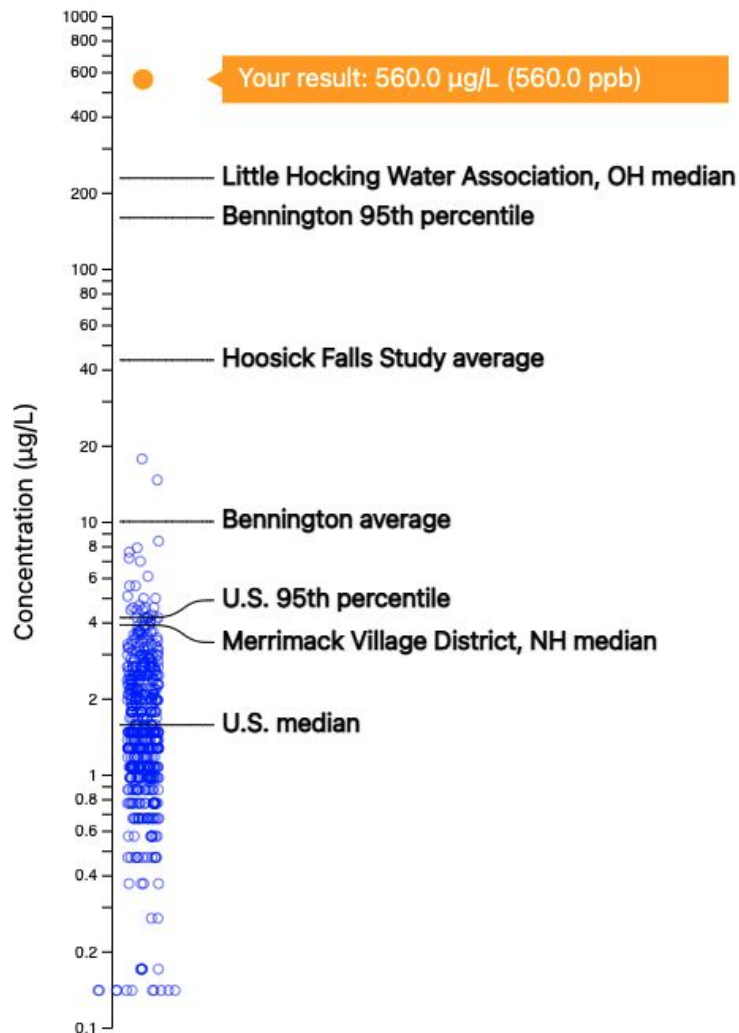
Your result: 560.0 µg/L (You entered this as: 560.0 ppb)

⚠ Your result was **above** the U.S. 95th percentile of 4.17 ng/mL (4.17 µg/L)

⚠ Your result was **above** the U.S. median of 1.57 ng/mL (1.57 µg/L)

Graph legend

- People in a representative sampling of Americans
- PFOA level in my blood
- Benchmarks from a representative sampling of Americans and from other PFAS exposure studies



Keep a running list of questions you'll need help with





What's My Exposure?

Have you had your drinking water or blood tested for PFAS? Do you need help interpreting your results? Use *What's My Exposure* to better understand what your results mean. Our online tool will create a personalized report that shows how your levels compare with state and federal health guidelines, provides information on health effects, and shares tips for reducing your exposures.

[► Share / Print](#)[How to use this tool](#)[Enter your test results](#)[FAQ](#)[Share your feedback](#)

Enter your test results

Enter your test results on this page to generate your personalized exposure report. Remember to enter all results on your report! You may not have data from all the PFAS chemicals in the drop-down list; if so, don't worry, you will be able to create a report from the data you have. Please visit the [FAQ tab](#) to see answers to common questions. You can also contact the PFAS Exchange team at 617-332-4288, ext. 230 or email us at pfas-reach@silentspring.org.

Tools

- Issue Resource Pages
- Statistics for Action
- Legal support
- Health Studies
- Expert Networks



Evaluation



Next steps

Digital training series Third
Wednesday of the month 7-8pm

Video will be posted online at
CommunityActionWorks.org/Trainings

More resources available at
CommunityActionWorks.org/Digital

Next Training: March 17, getting digital
tools to digitally underserved
communities

Stay in touch:
Info@CommunityActionWorks.org

