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

- Remember
  - Recognizing and recalling facts

- Understand
  - Understanding what the facts mean

- Apply
  - Applying the facts, rules, concepts, and ideas

- Analyze
  - Breaking down information into component parts

- Evaluate
  - Judging the value of information or ideas

- Create
  - Combining parts to make a new whole
Bloom’s Taxonomy- applied to environmental health

<table>
<thead>
<tr>
<th>Level of EHL/EHS Topic</th>
<th>Breast Cancer</th>
<th>Autism</th>
<th>Asthma</th>
<th>Environ. Justice</th>
<th>Pesticide Exposure</th>
<th>Nano-material</th>
<th>Lead in Water</th>
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<tbody>
<tr>
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</tbody>
</table>

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 do you interact with?
- How comfortable are you interpreting technical documents?
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**
- Foam filter collects any PCB molecules as it comes into contact with air.
- Natural air flow.
- Collects temperature, humidity information for sampling location.

**EPA sampling method**
- As air is pulled in, PCB molecules collect onto foam filter.
- Air is pulled through at a steady rate using an electric pump.

**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).

**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.
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
Example Questions:
What is mg/m³? 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?”

![Graph showing PCB levels in air over monitoring rounds.](image)

- **EPA Guideline based on cancer risks (202 ng/m³)**
- **EPA Guideline based on non-cancer risk (110 ng/m³) & EPA 1st Trigger (Concentration of PCBs in air when EPA must take action)**
- **Other monitors' results**: Results of other monitors at each round of data collection.
- **Your results**: Results from your monitor at each round of data collection.

<table>
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<tr>
<th>Monitoring Round 1</th>
<th>Monitoring Round 2</th>
<th>Monitoring Round 3</th>
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<tbody>
<tr>
<td>1.11 ng/m³</td>
<td>1.06 ng/m³</td>
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Tips

1. Know your goals
2. Become the expert
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

<table>
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<th>Symbol</th>
<th>Prefix</th>
<th>Multiplication Factor</th>
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<tr>
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<td>a</td>
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<td>$10^{-18}$</td>
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</table>
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.

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