A First Look at Technical Documents

Facilitator Instructions

Overview

Participants examine selections from a technical document and become familiar with typical sections. They record their observations and questions on sticky notes, and group those notes by category. Then they discuss next steps needed to identify information in the document that will help their campaign.

When to Use It

When a community has a technical document that seems impenetrable; they don't know where to begin.

If you are leading this workshop at a conference where there is no particular technical document, you can find sample data sets in the *Data Sources* section at sfa.terc.edu.

Depending on the group's questions, follow this workshop with other activities from Making Sense of the Data, Drawing Your Own Conclusions, and Pieces of the Risk Puzzle.

Skills

- Problem-solving through collaboration
- Identifying key information needed, and strategizing about how to find it

Notes for Facilitator

This workshop does not offer strategic advice about how to proceed with a campaign after reading a technical document, or about whether and how to challenge the findings in the document. Understanding your document is an important first step, but your strategy will depend on many things – politics, state regulations, economics, and more.

Smart Moves

- Slow down
- Talk it out
- Seek verification

Time: 60 Minutes

Preparation

Choose which kind of technical document you have. Review the appropriate page of *Strategies for Reading...*

- *Environmental Testing Results Reports*
- *Environmental Impact Statements*
- *Permit Documents*

Using *Strategies for Reading ...* select 1-2 pages from each "typical section" of your document. If possible, enlarge each of the selected pages on a photocopier.

Post one large blank sheet labeled "Other Questions or Observations."

Cut apart *Participant Instructions* slips (p. 3). Tape them on each posted page.

Using *Strategies for Reading...* prepare blank poster-paper sheets with the Categories of Questions & Observations that match your technical document:

- Definitions and Properties
- The Process
- Results (or Predictions)
- Health Risks
- Action Needed

Materials

Enlarged selected pages from the technical document (posted on the wall or tables of the meeting room, leave plenty of space between them)

Participant instructions slips from p. 3 (one per posted document page, taped to that page)

Blank sheets with Categories of Questions and Observations (posted on the wall or tables)

Sticky notes (medium-sized)

Markers and pens

Step 1: Set the Stage (5 minutes)

Tell participants that technical documents* can be confusing, and while we might not be able to understand everything about them, together we can make sense of a few selected excerpts. If we figure out what questions we still have, that will help us determine next steps. Then explain the activity.

** or "Environmental Test Results," "Environmental Impact Reports," or "Permit Documents" as appropriate.*

Step 2: In pairs or small groups of 3-4 (20 minutes)

Give each person sticky notes and a pen or marker. Divide into pairs or small groups. Tell each group to start with one of the technical document pages posted.

After reading each page, they should share their observations and questions with each other, then write them on sticky notes and post them on the pages (one question or observation per note).

Encourage them to write specific questions – ones that will make sense if they are moved around and read by another participant. You may want to 'seed' a few pages with some notes of your own. Groups move from page to page, until they have visited most pages.

Step 3: Organize (10 minutes)

Turn the group's attention to the blank Questions & Observations sheets. Ask participants to take a few sticky notes off the the technical documents and move them to the sheets that best fit each question. If participants are not sure where to move some notes, they can discuss with each other or you. Keep going until all the sticky notes are categorized.

When this is done, take a few minutes to look at the categorized questions together. Participants then write their names next to any questions they think they can answer.

Step 4: Debrief (15 minutes)

- Lead the group in discussion. As needed, share your own observations.
- How was that experience? What patterns did you see? What insights did you have?
- Which questions and observations stand out as most important?
- Which questions need to be answered *first* to help the group's goals?

Tell the group that questions can be answered in different ways: using resources, looking online, asking experts, doing activities at future meetings. Some questions have no specific answer, but can guide the work.

Step 5: Next Steps (10 minutes)

[If the group is very large, do this after the meeting with a smaller group of people who are interested.] Discuss and identify steps needed to answer the questions identified as most important or that need to be answered first. Possible next steps include:

- Divide up questions about definitions or technical processes among members of the group. Ask a few people to research the answers before the next meeting. They can develop expertise on on the topic, and then teach the rest of the group.
- Do a related *Statistics for Action* activity at the next meeting to help with a key concept.
- Consult an EPA or engineering expert between meetings, or bring them to the next meeting.

(Cut into strips and attach one to each posted document page)

Instructions

Look at this page carefully. What do you notice? What seems clear?
What does not make sense? What questions do you have?
Write down your observations and questions, one per sticky note.

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Strategies for Reading Environmental Testing Results Reports

These reports show the results of tests in which samples of soil, air, water, or sediment were taken from specific locations, brought to a laboratory, and examined to see if the samples show evidence of certain chemicals. They show where the samples were taken, how much contamination was found in each sample, and how the levels of contamination found compare to any applicable legal standards.

A report may be written by multiple organizations. A common scenario: The EPA or DEP commissions the tests and decides where to sample, but contracts with an environmental engineering company to do the actual work. The engineers then take the samples, but contract with a chemical laboratory to analyze the samples. Then the lab returns the raw results, the engineering company summarizes the most important findings, and the agency determines if any action is needed.

Remember, the reports will *not* show contamination in locations that were not tested, or of contaminants for which the lab didn't or couldn't test. For more details about soil or water testing, review the *Soil Quality Guide: Digging into the Dirt* and *Water Quality Guide: Read Before You Drink* on the SfA web site.

Typical Sections

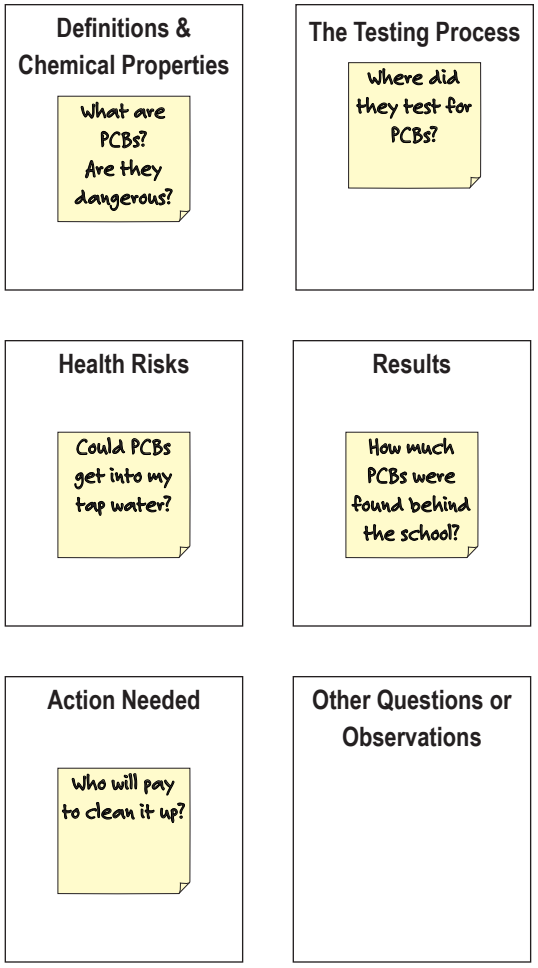
Select a typical page or two from each of the following sections, if available:

1. Narrative summary of report
2. Tables with a summary of the most important data
3. Maps of the site with testing locations marked
4. Tables of full lab results, including results both over and under the detectable limits
5. Descriptions of samples from the field (temperature, pH)
6. "Chain of custody" reports

Categories of Questions & Observations

On the right are typical categories into which questions and observations can be grouped.

An example is given for each, but you don't need to write the example on the posted paper. Just the category will do.



Strategies for Reading Environmental Impact Statements

An Environmental Impact Statement (EIS) or Report (EIR) is a written summary of an environmental impact assessment. An assessment is required when a new project (factory, development, construction) might have an impact on environmental or human health. In some cases, an EIS is made before cleaning up a polluted site, to see if the cleanup itself would put anyone at risk.

An EIS answers the question, "If this proposed project goes forward, how could it affect the environment and/or public health?" It will *not* answer the political question, "Should this project be allowed to proceed?"

Typical Sections

Select a typical page or two from each of the following sections, if available:

1. Introduction explaining why the project is being proposed
2. Description of the places that might be affected
3. Variety of alternatives for implementing the project. One should be a "No Action" alternative, predicting impacts if things were left as-is. This is used as a baseline for comparing the other alternatives.
4. Analysis of the environmental impacts of each of the alternatives, including things like:

- impacts to threatened or endangered species
- impacts on air and water quality
- impacts to historic and cultural sites
- social and economic impacts on local communities
- cost analysis for each alternative, including costs to mitigate expected impacts

5. Optional or Additional Sections:

- Evidence of funding for the complete project
- Proposed environmental mitigation plans, if the preferred alternative will cause significant impact

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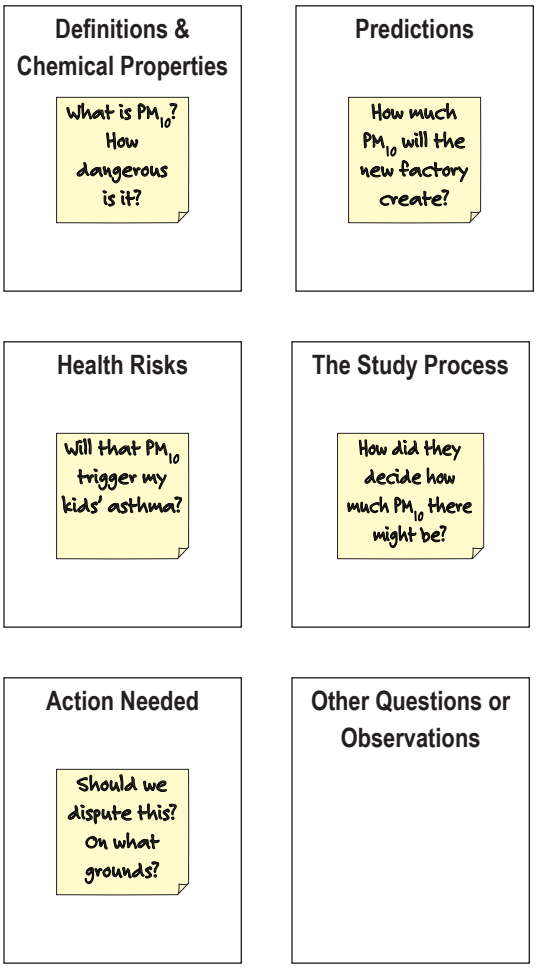

Strategies for Reading Permit Documents

Permits are granted by government agencies. Many documents are generated in a permitting process. Permit granting is political – a balance of socio-economic benefits vs. environmental degradation. Granting or renewing a permit requires public involvement, where people can comment on both sides of that balance.

A *permit application* is a document proposing a new project. The proposing company fills out the application. A government agency then decides whether or not to grant the permit, and what restrictions the permit should specify. Most permits eventually expire and must be renewed.

A *release permit* lets a company put a certain amount of pollution into the water, air, or soil in a period of time. This can be called a release, discharge, runoff, or effluent.

A *site permit* allows a company to construct a building and parking lots, checking to see if the company has a plan (both during construction and long-term) for dealing with water, sewage, trash, construction pollution, electricity, traffic, stormwater runoff, etc.

Other permits limit the amount or type of fuel a company can burn, or how much water or power they can use. Special permits are required for companies whose business is storing or treating hazardous waste.

Typical Sections

Select a typical page or two from each section. Section names vary greatly, depending on the type of permit and the granting agency. Focus on the issue you care about most. If you think the company isn't being truthful, use sections that depend on numbers provided by the company. Most permit documents specify exact numbers for each building, tank, boiler, furnace, machine, etc. regulating:

- what it does, and how long and how often it can operate
- what chemicals are used and how, where and how they are stored, and any possible contact with people
- how much fuel, water, or power it can consume
- how much contamination it can release in a period of time
- how often it should be monitored and inspected, and how that information should be kept and reported

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