Frequently Asked Questions about Air Sampling

What is air sampling?

Air sampling is collecting an amount of air and measuring the level of contaminants in that air. It helps us find out what contaminants- like dust or sulfur dioxide- are in the air. It also helps us measure the level of contaminants to determine if the air you breathe could harm your health. Sometimes sampling looks for solid particles and liquid droplets, called particulate matter or PM. You can easily see some particulate matter, like smoke or dust. Other particulate matter is very tiny and can only be detected using a microscope. We can use air sampling to look specifically for tiny particulates, since smaller particles are more likely to enter your lungs when you breathe and could harm your health.

Monitors collect air samples to help us figure out what types of contaminants are in the air you breathe.

When do you use air sampling?

We use air sampling to understand what is in the air you breathe. Sampling can be used to look for many different types of contaminants, including ozone, particulate matter (like dust), carbon monoxide, lead, sulfur dioxide or nitrogen dioxide. It can help us:

1. Find out what contaminants are in the air
2. Determine the level of contaminants in the air
3. Evaluate whether the level of contaminants in the air could harm your health

How does air sampling work?

1. **Develop a sampling plan.** We visit a facility or community to figure out the best locations to set-up air monitors to collect samples. To choose locations, we consider things like weather, wind speed and direction, and where people play or spend time.
2. **Set-up air monitors to collect samples.** We set-up multiple air monitors to collect air samples from many locations around or near a facility. The type of air monitors we use varies depending on the type of contaminant we are looking for. For example, one type of monitor is used to measure the amount of particulate matter- like dust- in the air. A different type of monitor can measure gases- like carbon monoxide- in the air.

Who does the sampling?

Washington State Department of Health (Health) has a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is part of the Centers for Disease Control and Prevention (CDC) and is the federal public health agency responsible for health issues related to hazardous waste sites. ATSDR is available to help us with air sampling. Together, we work with local and state agencies, facilities, and communities to gather the information we need to determine the best locations to set-up air monitors or

sampling units. ATSDR then collects samples, critically reviews the results, and documents the results. We look at what they find to make recommendations about how to protect your health and the health of your community.

How long does sampling take?

The amount of time air monitors are set-up to collect samples will depend on which contaminant we are looking for and which type of monitor we need to use. Typically, air monitors are set-up for as little as a few days to as long as several weeks. After sampling is complete, more work is needed to analyze the samples in order to determine which contaminants are present and what level of contaminants are in the air. Depending on the type of contaminants we are looking for, this part of the process can take as long as a year. We will keep you updated about the timeline throughout the process. You can get up-to-date information by visiting our website at www.doh.wa.gov/consults or calling 1-877-485-7316.

What are the results of sampling, and what will they tell us?

Results from air sampling will help us:

- Understand what contaminants are in the air
- Understand the level of contaminants in the air
- Determine whether the level of contaminants in the air could harm your health
- Make recommendations about the best way to protect your health and the health of your community

What won't the results be able to tell us?

Sampling provides a "snapshot" that helps us understand the current level of contaminants in the air. However, it cannot tell us how the level of contaminants may change over time or under different weather conditions. It also cannot tell us where the contaminants are coming from since they may come from multiple sources.

Will the results help protect my health?

Once sampling is complete, we will review the results from ATSDR and make recommendations about the best way to protect your health and the health of your community. These recommendations may include things you can do. We may also suggest actions a facility or other local and state agencies can take to protect your health.

Sometimes, sampling does not provide all the information we need to determine if contaminants will impact your health. If that is the case, we will use the results to determine what additional information we need to collect.

If you find high levels of contaminants, will breathing the air harm my health?

Breathing air with high levels of contaminants may or may not impact your health. The level of contaminants in the air is not the only factor that will determine whether or not you will become sick. How a contaminant in the air may impact your health depends on:

- Type of contaminant
- Whether the contaminant is small enough to enter your lungs
- Level of the contaminant in the air

- How much and how long you breathe in the contaminant
- Whether you have any pre-existing health conditions, like asthma or chronic obstructive pulmonary disease (COPD)

How do I find out about the results from sampling?

We will share information with your community in a variety of ways, including presentations, factsheets, or one-on-one conversations. After sampling is complete, we will:

- Share the results from sampling
- Share next steps, including whether we need to collect additional information
- Inform you about potential health concerns
- Explain how you could be exposed to contaminants
- Share actions you can take to minimize exposure and protect your health

You can learn more about air sampling and get up-to-date information by visiting our website at www.doh.wa.gov/consults or calling 1-877-485-7316.

References

Agency for Toxic Substances and Disease Registry (ATSDR). (No date). "Air sampling and modeling: Measuring and estimating levels of air pollution." Available at: http://www.atsdr.cdc.gov/sites/vieques/docs/Air_Sampling%26Modeling_Booklet.pdf.

U.S. Environmental Protection Agency (EPA). (February 2016). "Particulate Matter- Basic Information." Available at: https://www3.epa.gov/pm/basic.html.

DOH 334-396 May 2016. For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).