

equipment maintenance, process changes, and/or personal protective equipment (last resort).

To determine if the controls are effective, EH&S can conduct additional monitoring/sampling. Employees and students monitored will receive copies of the results.

Health Effects Below Regulatory Limits

Results below established limits and recommendations may still produce symptoms similar to those indicated on the Material Safety Data Sheet (MSDS). This may be due to a wide variation in individual susceptibility.

A small percentage of people may experience discomfort from some substances at concentrations at or below the established limits or recommendations. These effects are usually minor and brief with no long term effects.

An even smaller percentage of people may experience more prolonged symptoms because of pre-existing conditions. For example, individuals may be sensitive or otherwise unusually responsive to some chemicals because of genetic factors, age, medications, or previous exposure. In these situations, it is recommended that EH&S and an



occupational physician be consulted.

Requesting Evaluation / Monitoring

If you have questions or concerns about chemical exposures in your work area, notify your supervisor or contact EH&S for an evaluation, and if necessary, EH&S will conduct monitoring/sampling.

Getting Assistance

For additional information, see the WSU Laboratory Safety Manual, Section 2.C "Exposure Monitoring" at www.ehs.wsu.edu/LSM/S2_C.asp or contact EH&S.



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Environmental Health & Safety (EH&S) can monitor and sample for most dusts, fumes, and vapors to evaluate exposures to chemical air contaminants.

Monitoring and sampling results are used to determine the need for engineering controls (e.g., supplemental ventilation) or personal protective equipment (e.g., respiratory protection) and assure compliance with regulatory standards.

EH&S uses a variety of sampling and monitoring equipment when evaluating air contaminants because current technology does not offer a “single” instrument that can detect everything that may be present in the air.



How Does EH&S Determine The Need For Monitoring / Sampling?

Generally, there are two situations when EH&S receives requests to monitor or sample. One is when someone wants to know the chemical exposure levels during a specific process (e.g., painting, welding, research, etc.).

The other situation is when someone wants to know “What is that smell?” or “What is in the air?” These two situations require different approaches.



Evaluating a specific process for air contaminants is the easier of the two because EH&S:

- knows what chemicals need to be monitored / sampled;
- has the time to evaluate the process and determine the monitoring instrument, proper sampling media and protocol; and
- can obtain sampling media (stock or order) in a reasonable time.

Determining “What is that smell?” or “What’s in the air?” is not as easy. While people asking these questions may want answers immediately, these situations normally take additional time:

- Although EH&S has several direct reading instruments for specific chemicals and sampling media for chemicals routinely used, there is no single, universal sampling/monitoring instrument available;
- the source of the contaminants is unknown, and an investigation is needed to determine what contaminants need to be sampled or monitored, what instrumentation is to be used, and the sampling protocol; and
- uncertainty of when the sampling media will be needed and the



associated expiration dates, make it impossible to keep all types of media in stock.

There are times when identifying contaminant(s) to monitor/sample is extremely difficult.

So EH&S Has Monitored/Sampled, What Are The Results?

EH&S obtains monitoring/sampling results in two ways:

1. Retrieving information from a direct reading instrument. Air contaminants are sampled and analyzed within the instrument in a relatively short time (seconds to minutes); and
2. Sending the sample media to an accredited lab. The results may be available within a couple of days to several weeks.

Once obtained, results are compared to regulatory limits and recommended levels.

Controlling Air Contaminant Exposure

If the monitoring / sampling results show levels above regulatory limits, EH&S will work with the department to control the exposure.

Occupational exposures can be controlled through substitution of a less hazardous material, ventilation, enclosures,