

Air Contaminants: Overview

5-Minute Talk

Overview of topic

An air contaminant is any substance that is accidentally or unintentionally introduced into the air, having the effect of rendering the air toxic or harmful to some degree.

OSHA, at 29 CFR 1910.1000 Air contaminants, protects employees from occupational exposure to air contaminants. The regulation applies to all workers who may be subjected to workplace air contaminants. To achieve compliance with this regulation, administrative or engineering controls must first be determined and implemented whenever feasible.

Personal protective equipment

When such controls are not feasible to achieve full compliance, personal protective equipment (PPE) or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in the regulation.

Identification and quantification of air contaminants through air monitoring is an essential component of every company's health and safety program. Reliable measurements of airborne contaminants are useful for the following:

- protective equipment.
- where protection is needed.
- potential health effects of exposure.
- need for specific medical monitoring.

Exposure limits

Exposure is measured in permissible exposure limits (PELs).

Some ways for an employer to comply with §1910.1000 include:

- meeting the limits for employee exposure to specific substances as listed in §1910.1000.
- eliminating contaminants through source control, eliminating individual sources of contamination, and adjusting or maintaining equipment properly.
- increasing the amount of outside air coming into the facility by re-engineering the ventilation system.
- using air cleaners to collect pollutants.



Any equipment and/or technical measures used to control air contaminants must be approved for each particular use by a competent industrial hygienist or other technically qualified person. If respirators are used, their use must comply with §1910.134.

Employee training

While there are no specified training requirements, education and communication are important elements in both remedial and preventative indoor air quality management.

Training tips

Review §1910.1000 to determine what substances from tables Z-1, Z-2, and Z-3 are present in the workplace. Inform the employees of the presence of these substances and what the PELs are for each individual substance.

Explain the symptoms of exposure to these substances and what employees are expected to do if they believe they have been exposed.

Show the equipment used for testing and demonstrate how to test air samples, if employees are going to be responsible for that task.

If PPE is used in addition to engineering controls, show examples of the appropriate PPE, and demonstrate its use.

Where to go for more information

29 CFR 1910.1000—Air contaminants.

29 CFR 1910.134—Respiratory protection.

