

Air Contaminants

Scenario Answer Key

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.

It happened like this

Joel was going to be working in an area where the permissible exposure (PEL) limit of benzene was high. He knew he needed to wear a respirator in this area, and he received a medical evaluation that permitted him to wear a respirator.

There was one problem, though. He looked through the safety drawer for a cartridge designed to protect against benzene exposure. Joel couldn't find the exact cartridge, so he decided to use one that protects against exposure to anhydrous ammonia.

Let's talk about this, okay?

What are the issues?

- The company failed to have the benzene cartridge available.
- Joel violated company safety policies.

What did Joel do right?

- Realized that he needed to have a specific cartridge in the respirator to enter the benzene area.
- Received a medical evaluation that cleared him to wear a respirator.

What did Joel do wrong?

- Randomly selected a cartridge to use when he couldn't find the one specifically designed to protect him against benzene.
- Did not inform supervisor that the cartridge was unavailable.



What happens next?

What do you think should happen next?

- Benzene cartridges should be supplied.
- The safety person should discuss the following with Joel:
 - o Exposure limits outlined in the OSHA standard,
 - o The immediate and long-term health hazards from overexposure,
 - o Work practices and personal protective equipment; and
 - o Emergency response procedures.

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.

