



Atmospheric Testing of Permit-Required Confined Spaces

Atmospheric testing of permit-required confined spaces is used so you can do both of the following:

1. Evaluate potential atmospheric hazards
2. Verify that acceptable atmospheric entry conditions exist

Evaluate Hazards

- Collect and analyze data on the atmosphere of your space using equipment that's sensitive enough and specific enough for any hazardous atmosphere that may arise. This will enable you to:
 - Develop appropriate entry procedures**and**
 - Maintain acceptable entry conditions.
- Have a technically-qualified individual perform, or at least review, the following:
 - Evaluate and interpret the data
 - Identify all serious hazards
 - Develop appropriate entry procedures

Note:

Examples of technically-qualified individuals include:

- WISHA industrial hygiene consultant
- Qualified industrial hygienist
- Qualified registered safety engineer
- Qualified safety professional
- Certified marine chemist

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Verify that Acceptable Entry Conditions Exist

Verify that acceptable entry conditions exist by doing the following:

- If the space may contain a hazardous atmosphere, test for all potential contaminants.
 - Use the equipment specified on your permit, for the time specified by the manufacturer, to determine whether contaminants are within the range of acceptable entry conditions.
 - Measure for the time recommended by the manufacturer.
- Perform tests in this order:
 - First, perform a test for oxygen. Most combustible gas meters are oxygen dependent and will not provide reliable readings in an oxygen-deficient atmosphere.
 - Next, test for combustible gases. They present an immediate threat to life, through inhalation, fire, or explosion.
 - Last, if necessary, test for toxic gases and vapors.
- Record test results, such as the actual concentration, in the appropriate space on the permit.
 - When monitoring atmospheres that may be stratified, also do the following:
 - Test the atmospheric envelope at a distance of approximately 4 feet (1.22 m) in the direction of travel, and to each side.
 - If using a sampling probe, adapt the entrant's rate of progress to the sampling speed and detector response.