

4123:1-5-22 Confined spaces.

(A) No employee shall be required to enter into any confined space unless a confined space entry procedure, incorporating one of the following, is used (see appendix to this rule for recommended entry procedures):

(1) Air sampling shall be performed by qualified, trained personnel prior to and periodically during occupancy to determine that the atmosphere within the confined space contains an adequate quantity of oxygen (nineteen per cent), and any known or expected harmful atmospheric contaminants have been diluted to safe concentrations.

(2) A supplied-air respirator or self-contained breathing apparatus is provided and used.

(B) When the confined space has been exposed to, contained, or is likely to have combustible gases within its confines (such as sewage treatment plants), it shall not be entered unless the atmosphere contains a concentration of less than ten per cent of the lower explosive limit, (see rule 4123:1-5-991 of the Administrative Code).

(C) Appropriate control measures, which may consist of forced or natural ventilation, use of personal protective equipment, a combination of these, or other effective control techniques, shall be instituted if tests under paragraph (A)(1) or (B) of this rule indicate that the atmosphere in the space to be entered contains:

(1) Any concentration of flammable vapor or gas ten per cent or greater of the lower explosive limit; and/or,

(2) A hazardous concentration of any known or expected toxic contaminants; and/or,

(3) Less than nineteen per cent oxygen.

(D) Means of safe entry and exit shall be provided for entering or leaving a manhole, vault or other similar underground area.

(E) Where electrical equipment is used in confined spaces subject to combustible atmospheres, the permanent fixtures to which the lamp socket and plugs are attached shall be the type approved for that location. All extension cords shall be made of heavy duty cord. All lamps shall be guarded.

Effective: 1/1/86

APPENDIX TO RULE 4123:1-5-22

Recommended Procedures for Confined Space Entry

- (1) Designate at least one trained person to be responsible for adherence to entry procedures and require written approval by that person before permitting anyone to enter the confined space;
- (2) Post established entry procedures immediately adjacent to all confined space entry ports; other acceptable areas for posting would include the lid of the storage container or to post requirements for respiratory or testing equipment on crew trucks;
- (3) Provide periodic instruction and training in proper entry procedures to be used;
- (4) Standby personnel where provided shall be required at all times to be in communication with the worker within the confined space; an alarm or two-way radio system for the standby worker will be effective;
- (5) Approved rescue equipment should be available; since entry ports for confined spaces vary in size, precaution should be used in obtaining equipment of a proper size;
- (6) Establish procedures to prevent ignition of combustible atmospheres or re-entry of gases or liquids by locking out switches and blanking off transmission pipes; use nonsparking tools;
- (7) Prevent generation of contaminants by neutralizing or flushing out residual materials;
- (8) In testing for contaminants use only approved instruments maintained in proper working order;
- (9) Continual monitoring of oxygen and contaminant concentrations during occupancy;
- (10) If respiratory equipment is supplied by an air compressor piped system, this system shall meet the specifications of the "Compressed Gas Association," to assure a supply of uncontaminated air;
- (11) When supplied-air or self-contained respiratory apparatus is used, personnel should be trained in the proper use of such apparatus;
- (12) Many employers use tags to show that a confined space may be entered safely. An example of such a tag is as follows:

CONFINED SPACE ENTRY PERMIT					
Date _____					
Area or Equipment to be Entered _____					
Location _____					
Purpose of Entry _____					
Testing Instruments Used _____					
Ventilation Equipment Used _____					
Rescue Equipment Provided _____					
Pipes Blanked Off & Switches Locked Out _____					
Periodic Checks Prior to Entry	Time	Oxygen %	% LEL Reading	Tested By	Comments
1					
2					
3					
4					
5					
6					
7					
<p>THIS CONFINED SPACE HAS BEEN INSPECTED AND FOUND SAFE FOR ENTRY FOR PERIOD SHOWN.</p> <p>Signed _____</p> <p style="text-align: center;">(Person in Charge) Date/Time</p>					

(13) Emergency rescue procedures.

(a) In all cases when an employee is stationed outside a compartment, tank, or a confined space, as tender or standby person for the employees working inside, he shall have immediately available for emergency use all necessary personal protective equipment. The tender or standby person shall wear the personal protective equipment if he is exposed to the hazard.

(b) When an employee enters a toxic or flammable atmosphere, he shall be provided with and use an adequate, attended lifeline.