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## CONFINED SPACE

### I. INTRODUCTION

Employees of the City may have to enter confined spaces to perform assigned work. This regulation will establish requirements to safely perform such assigned work.

### II. SCOPE AND APPLICATION

This regulation will identify general methods for eliminating or controlling hazards, safeguarding entrants, and for regulating entry into a confined space. No entry into a hazardous confined space shall be permitted without documented procedures in place for safe entry and operation. This regulation applies to all employees who are assigned to enter confined spaces, perform attendant duties, and/or supervise work in confined spaces.

### III. DEFINITIONS

- A. A **Confined Space** will have these three criteria:
  - 1. Any space that is large enough and configured such that an employee can bodily enter and perform work;
  - 2. Has limited or restricted means of entry or exit; and
  - 3. Is not intended for continuous employee occupancy.
  
- B. A **Hazardous (Permit-Required) Confined Space** will meet all three criteria above for a confined space, and will contain one or more of the following hazards:
  - 1. Contains or has the potential to contain a hazardous atmosphere;
  - 2. Potential for engulfment;
  - 3. Internal configuration such that an employee could be trapped or asphyxiated by inwardly converging walls or a floor that slopes downward and tapers to a smaller cross section; OR
  - 4. Any other recognized safety or health hazard.

For the purpose of this regulation, Permit-required confined spaces will be referred to as Hazardous Confined Spaces.

- C. An **Entry Permit** is written documentation that once approved by all members of an entry team, certifies a hazardous (permit-required) confined space is safe for entry. The City's entry permit can be found in Appendix A of this regulation.

### IV. GENERAL REQUIREMENTS

An inspection of all confined spaces and hazardous confined spaces must be performed to evaluate the hazards of the spaces before employees enter them. Upon request, Risk and Safety Services is available to perform a review of workplace confined spaces and hazardous (permit-required) confined spaces. If work is to be performed inside of a confined space, the affected parties shall document how the space was determined or modified to be safe for entry with an Entry Permit that contains the date, location of the space, and the signature of the person certifying the space is safe for entry. The Entry Permit to be used throughout the City can be found in Exhibit 6.01ff. Prior to each hazardous (permit-required) confined space entry all employees shall review any air monitoring performed and review and sign the entry permit. If an employee identifies a step that has been missed or is incomplete they shall notify the entry supervisor and all other entrants and attendants. Any member of the entry team has the right to stop work until the situation has been corrected.

A. Hazardous (permit-required) Confined Spaces with only Atmospheric Hazards

When the **only** hazard posed by the hazardous (permit-required) confined space is an actual or potential hazardous atmosphere and continuous forced air ventilation alone can maintain a safe atmosphere, the following conditions shall be met prior to entry:

1. Forced air ventilation shall be supplied from a clean source and directed to ventilate the immediate areas where an employee is or will be present.
2. Atmospheric testing for oxygen content, flammable gases and vapors, and potential toxic air contaminants shall be performed prior to opening, when possible, and before entry and continuously while occupied. Employees shall immediately leave the space if a hazardous atmosphere is detected during monitoring. Where possible, all entrants should wear confined space monitors.
3. Barriers to prevent an accidental fall or foreign objects entering the space shall be used.

B. Changing a Hazardous Confined Space to a Confined Space (Reclassification)

When there is no potential for a hazardous atmosphere and all "other hazards" within the space can be eliminated without entry into the space, then procedures for entry will be developed to instruct the employees how to eliminate the hazards from the space prior to entry. These procedures should be attached to the entry permit. The "other hazards" of these confined spaces include but are not limited to mechanical or electrical hazards.

C. Performing work inside a Hazardous (permit-required) Confined Space or performing work which creates a Hazardous (permit-required) Confined Space.

When employees must enter hazardous (permit-required) confined spaces or when the work to be performed inside a confined space creates or has the potential to create a hazardous work environment (i.e. welding in a confined space) employees are expected to take the following precautions:

1. Develop safe entry procedures;
2. Institute measures to prevent unauthorized entry;
3. Specify acceptable entry conditions;

4. Isolate the hazardous space, purging, inerting, flushing, or ventilating the hazardous space as necessary to eliminate or control the atmospheric hazards; and
5. Verify that conditions in the hazardous space are acceptable for entry throughout the duration of an authorized entry.

If hot work is required, a Hot Work Permit shall be completed with the appropriate fire watch. (See Fire Prevention and Protection Regulation for additional information.)

#### V. ENTRY TEAM RESPONSIBILITIES

All entry team members must be informed of the hazards associated with the hazardous confined space including information on signs, symptoms, and consequences of exposure (i.e. entrants may exhibit impaired coordination, deeper respiration, or poor judgment in oxygen-deficient environments). For each hazardous (permit-required) confined space entry, an entry team shall be assembled to perform the following duties:

##### A. Entry Supervisors

Entry Supervisors are responsible for:

1. Ensuring that the following equipment is provided and used appropriately:
  - a. Testing and monitoring equipment
  - b. Ventilation equipment
  - c. Communications equipment
  - d. Personal Protective Equipment
  - e. Lighting equipment
  - f. Barriers and shields
  - g. Equipment for ingress and egress (ladders)
  - h. Rescue and emergency equipment for non-entry rescue
  - i. Any other equipment necessary for safe entry
2. Verifying that safeguards required by the documented procedures have been implemented;
3. Verifying the means for summoning emergency rescue services is operable;
4. Remove personnel who are not authorized to enter the hazardous (permit-required) confined space during entry operations;
5. Regularly determine that the entry operation is being performed in a manner consistent with the requirements of the documented entry procedures and that acceptable entry conditions are maintained;
6. Authorize entry and close out permit at the end of the entry; and
7. When the confined space presents unique or unusual hazards the Entry Supervisor should notify the Fire Department in advance

Note: Duties of an Entry Supervisor may be passed from one individual to another during the course of an entry operation so long as the replacement is trained to fulfill the role.

##### B. Attendant Duties

During a hazardous (permit-required) confined space entry operation, an Attendant must remain outside the permit space continuously and not be

assigned any other duties during the entry operation. The Attendant may also serve as the Entry Supervisor. The Attendant:

1. Maintains a head count of entrants in the space;
2. Monitors the conditions inside and outside the hazardous confined space and maintains communication with entrants;
3. Determines when an evacuation is necessary and alerts the entrants to evacuate; and
4. Summons emergency rescue services when necessary.

#### C. Entrant Duties

All Entrants shall:

1. Be familiar with and properly use the entry equipment provided
2. Regularly communicate to the attendant the conditions of the hazardous confined space and alert the attendant if you recognize signs or symptoms of exposure to a dangerous situation or if you detect a prohibited condition
3. Exit the hazardous confined space as soon as possible whenever:
  - a. You have been advised to do so by the attendant or entry supervisor;
  - b. If you recognize any warning sign or symptom of exposure to a dangerous situation or a prohibited condition; or
  - c. An evacuation alarm is activated

#### VI. RESCUE AND EMERGENCY SERVICES

Only Boise Fire Department shall be authorized to enter confined spaces in order to perform rescue services. All other employees are not permitted to enter a hazardous confined space to rescue someone; however they may attempt to use non-entry rescue equipment to retrieve personnel from the space.

During rescue operations emergency rescue services shall operate under their standard operating procedures.

#### VII. TRAINING

All employees who enter a confined space to perform work shall be trained in the required duties and procedures for safe entry and operations. They shall also be trained on the hazards of the confined space(s) they must enter. Upon request Risk and Safety Services will facilitate training on general confined space entry operations. Each department will be responsible for informing their employees of the specific hazards involved with a particular confined space.

#### VIII. CONTRACTOR SERVICES

If a department acquires a contractor to perform work that involves joint confined space entry by City employees and contractor employees, the department shall ensure all the requirements of this regulation are followed.