



City Manager _____

THE CITY OF POMONA

SAFETY POLICIES AND PROCEDURES

CONFINED SPACE POLICY

I. PURPOSE

The purpose of the City of Pomona Confined Space Policy is to ensure that employees are adequately trained and informed of the hazards associated with work in or near confined spaces.

II. APPLICABILITY

This Policy applies to all City employees whose jobs require them to participate in confined space entries as outlined in this policy.

III. POLICY

It is the policy of the City of Pomona that all aspects of Cal/OSHA's requirements for Confined Spaces, *California General Industry Safety Orders, Title 8, GISO Articles 5156, 5157, and 5158* shall be met or exceeded. These articles provide minimum standards for preventing employee exposure to confined space hazards as defined within spaces such as vaults, pits, sewers, pressure vessels, pipelines, tanks, silos, vats, compartments, ducts, bins, and tubs.

IV. DEFINITION OF TERMS

"Attendant" – an individual stationed outside one or more permit spaces who monitors the authorized entrants, and perform all attendant's duties assigned in the employer's permit space program.

"Authorized Entrant" – an employee who is authorized by the City of Pomona to enter a permit space.

"Confined Space" – a space that: (1) is large enough and so configured that an employee can enter and perform assigned work; (2) has limited or restricted means of entry or exit (i.e. tanks, pressure vessels, bins, vaults and pits); and (3) is not designed for continuous occupancy.

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“Emergency” - any occurrence, including any failure of hazard control measures or monitoring equipment, or an internal or external event affecting the permit space that could endanger the entrants.

“Entry Permit” – the written or printed document that is provided by the City of Pomona to allow and control entry into a permit space.

“Entry Supervisor” – the person, such as the Supervisor or Crew Chief, responsible for determining if acceptable entry conditions are present at a permit space where entry is planned; for authorizing entry and overseeing entry operations; and, for terminating entry as required by these specifications. NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this Policy for each role that he/she fills. Also, the duties of the entry supervisor may be passed from one individual to another during the course of an entry operation.

“Hot Work Permit” – the employer’s written authorization to perform operations involving riveting, cutting, welding, brazing or like-work capable of providing a source of ignition.

“Immediately Dangerous to Life or Health” – any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual’s ability to escape unaided from a permit space.

“Non-Permit Required Confined Space” – a confined space that does not contain, or with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

“Oxygen Deficient Atmosphere” – an atmosphere containing less than 19.5% oxygen by volume.

“Oxygen Enriched Atmosphere” – an atmosphere containing more than 23.5% oxygen by volume.

“Permit-Required Confined Space” – a confined space that has one or more of the following characteristic: (1) contains or has the potential to contain a hazardous atmosphere; (2) contains a material that has the potential for engulfing an entrant; (3) has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; and/or (4) contains any other recognized serious safety or health hazard.

“Permit-Required Confined Space Program” – the employer’s overall program for controlling and protecting employees from permit space hazards, and for regulating employee entry into permit spaces.

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“Permit System” – the employer’s written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

“Prohibited Condition” – any condition in a permitted space that is not allowed by the permit during the period when entry is authorized.

“Retrieval System” – the equipment, including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor, used for non-entry rescue of persons from permit spaces.

“Testing” – the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

V. RESPONSIBILITY

A. Department Directors shall:

1. Ensure that the Confined Space Policy is implemented. The department director has the authority to delegate any or all portions of this Policy to subordinates, but the department director will be held responsible for compliance.

B. Division Managers shall:

1. Implement the Confined Space Policy.
2. Annually budget for items related to confined space equipment and training.

C. Employees shall:

1. Use all required equipment necessary for entry into confined spaces and following all confined space entry requirements as outlined in this policy or on the entry permit.

D. Safety Officer shall:

1. Update and maintain the Confined Space Policy on an annual basis.

VI. PROCEDURE

A. Permit Required Confined Space

A “Permit Required Confined Space” (PRCS) is any structure not designed for continuous occupancy, yet large enough or so shaped that a person may enter, but the means of entry and exit are restricted and the structure is not designed for continuous employee occupancy. A list of confined spaces normally encountered by City employees may be found in Appendix A. If an employee encounters an area that meets the definition of a PRCS that is not listed in Appendix A, said employee shall consult with the “Entry Supervisor” prior to entering the

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space. An entry supervisor, who is currently certified in First Aid and CPR, as well as confined space entry and pre-entry testing, must determine if acceptable entry conditions exist.

Prior to entering a PRCS, a “Confined Space Permit” shall be filled out by the entry supervisor and/or other employees involved in the PRCS entry as required on the respective form. The following requirements shall apply to all PRCS entries:

1. In addition to the employee entering the confined space, also known as the “Authorized Entrant”, the entry supervisor and one additional employee must be on the job site at all times. The entry supervisor shall continuously observe, and be in voice contact with the authorized entrant and shall be responsible for atmospheric testing. In addition, the entry supervisor must document these conditions on the confined space permit. The other employee who may be performing other tasks must be in visible contact, within a short distance, and shall be available at all times to assist in an emergency.
2. The following equipment shall be at the site prior to entering a PRCS:
 - a. A properly executed and dated City of Pomona Confined Space Permit.
 - b. A tripod and harness designed to lift an employee from the confined space.
 - c. A properly calibrated oxygen meter and a metering sensing device capable of detecting any gases suspected of being present.
 - d. A fresh air ventilating device.
 - e. A two-way radio, cellular telephone, or other device capable of contacting emergency personnel.
3. Prior to entering a PRCS, the following tests shall be performed and the results entered on the permit:
 - a. The location of the confined space, the date and time of entry, the names of all personnel at the site, and estimated time to complete the job.
 - b. The oxygen content of the space as recorded by the oxygen meter. (Note: If the oxygen meter registers less than 19.5% by volume or greater than 23.5% by volume, no one shall enter the space.
 - c. The presence of any flammable or toxic gas detected. (Note: Any time a 20% or greater lower flammable limit (LFL) of combustible gas is detected, all employees except those necessary to eliminate the hazard, shall be removed to a safe location).

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4. Whenever an oxygen deficiency is detected, or when flammable gases are present, the confined space shall be ventilated. The ventilation process shall be maintained until the hazardous gases are brought to an acceptable level and/or until the oxygen reading is at least 19.5%. Ventilation shall be maintained while any employee is in the space. Monitoring shall be maintained on a continual basis and the readings shall be recorded no less than every hour.
5. To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval equipment shall meet the following requirements:
 - a. Each authorized entrant shall use a chest or full body harness with a retrieval line attached at a suitable point so that when rescue is required, the entrant presents the smallest possible profile (i.e. at the center of the entrant's back near the shoulder level).
 - b. The retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from the vertical permit spaces more than five feet deep.
6. The entry supervisor shall terminate the entry and cancel the entry permit when:
 - a. The operations covered by the entry permit have been completed
 - b. A condition that is not covered by the entry permit arises in or near the confined space.
7. The division supervisor shall retain the entry permit for three (3) years. Any problems encountered during the operation shall be noted on the permit so that appropriate steps to correct the problem are taken.

B. Non-Permit Required Confined Spaces

A Non-Permit Required Confined Space (NPRCS) is defined as a confined space that does not contain, with respect to atmospheric hazards, or have the potential to contain any hazard capable of causing death or serious physical harm. The following requirements shall be observed when entering a NPRCS:

1. The entry supervisor shall demonstrate that the only hazard posed by the permit space is an actual or potential hazardous atmosphere.

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2. The entry supervisor shall demonstrate that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry.
3. The entry supervisor shall develop and maintain monitoring and inspection data that supports the demonstration required by (VI) (B)(1) and (B)(2).
4. The entry supervisor shall provide written certification containing the date, location of the space, and signature of the person making the certification. A confined space entry permit may be used for this purpose, but must be clearly marked "Alternate Entry Procedures" to explain the partial absence of data, such as the name of an attendant. Certification shall be made prior to entry and shall be made available to each employee entering the space.
5. Alternate Entry Procedures shall include the following:
 - a. Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
 - b. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
 - c. Before an employee enters the NPRCS, the internal atmosphere shall be tested for the following conditions in this order: 1) oxygen content; 2) flammable gases and vapors; and 3) potential toxic air contaminants.
6. There may be no hazardous atmospheres within the space whenever any employee is inside the space.
7. Continuous forced air ventilation shall be used at all times when an employee is in the space.
8. The atmosphere shall be periodically tested with an oxygen meter and gas detector to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.
9. If a hazard arises within a NPRCS, each employee shall immediately exit the space. The entry supervisor shall determine if the hazard can be eliminated or if the operation must be re-defined as a PRCS entry.

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C. Wastewater System Confined Space Entry

The Entry supervisor must determine if a Sewer System Confined Space entry can be maintained in a safe condition for entry by continuous force air ventilation alone. The following procedures shall be followed prior to making a Sewer System Confined Space entry:

1. Check the surrounding area to make sure there are no hazards such as drifting vapors from tanks, piping, or sewers.
2. Using a gas monitor, test the confined space atmosphere to determine whether dangerous air contamination and/or an oxygen deficiency exist. Testing shall be performed by a person who has successfully completed gas detector training.
3. The minimum conditions to be monitored are oxygen deficiency, lower flammability limit, and hydrogen sulfide concentration. A record of the pre-entry test results shall be made on the entry permit and kept at the work site for the duration of the job. Affected employees shall be able to review the testing results. When work is being performed in two adjoining connected spaces, use the most hazardous readings from the two spaces.
4. Mechanical ventilation systems shall be set at 100% outside air. Wherever possible, additional manholes should be opened to increase air circulation. Use portable blowers to augment natural circulation if needed. After a suitable ventilating period, repeat the testing. Entry may not begin until testing has demonstrated that the hazardous atmosphere has been eliminated.
5. Ensure that all appropriate employees are adequately trained to handle sudden flooding or accidental releases of hazardous materials.

D. Water Reservoirs

A "Water Reservoir" is defined as a large above ground or partially submerged concrete or steel tank containing potable or reclaimed water for delivery to the water distribution system. Water reservoirs shall normally be considered non-permit required confined spaces. The following procedure shall be followed prior to entering a water reservoir:

1. The reservoir shall be tested for oxygen content in order to determine if a hazardous atmosphere exists.
2. Ensure that all electrical outlets/sources are adequately locked-out and tagged, and do not have the potential of becoming a shock hazard.

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3. Prior to entering a water reservoir, as much water as practicable shall be removed from the vessel. Under no circumstances shall the reservoir be entered if the water level, measured from the floor, exceeds one (1) foot.
4. Prior to entering the reservoir, all devices capable of allowing water to enter the reservoir shall be closed and locked or otherwise prevented from being accidentally opened.
5. For those reservoirs divided by a wall so that one half of the reservoir remains in service, the half being entered shall be drained and blocked as described in Section (VI)(D)(3) and (VI)(D)(4) above. Additionally, the half of the reservoir containing water shall be continuously observed and monitored to prevent water from overflowing the wall.

E. Training Requirements

Employees required to participate in confined space entries shall be trained, in advance and at least annually thereafter, to ensure they have the understanding, knowledge and skills necessary for the safe performance of duties within a confined space. Training shall include the following:

1. An explanation of confined space hazards and interpretation/application of this policy.
2. Discussion of specific hazards of the facility, location or entry operation.
3. Reasons for proper use and limitations of personal protective equipment and other safety equipment.
4. An explanation of the PRCS entry permit system and procedural requirements.
5. CPR and first aid certification.
6. Equipment testing training, such as gas testing equipment and calibration, tripod and rescue equipment usage).
7. Emergency response training including annual rescue drills.
8. Duties and responsibilities of each member of the confined space entry team.
9. Description of how to recognize exposure symptoms to themselves and co-workers.
10. Methods for alerting the attendant.

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F. Emergency Procedures During Confined Space Entries:

In the event that a confined space team member becomes injured or incapacitated, the other team members shall implement the following rescue procedures:

1. In the event of an emergency, the local fire department (911) shall be called immediately for rescue assistance.
2. If at any time there is any questionable action or non-movement by the employee inside of the confined space, a verbal check will be made. If there is no response, the attendant will attempt to remove the worker using the external rescue equipment, such as the tripod and lifeline. (Exception: If the worker is disabled due to falling or impact, he/she shall not be removed from the confined space until the paramedics are on site to direct the rescue, unless there is immediate danger to his/her life.)

VII. ACTION

This Policy is effective 2/2/07.

