

CITY OF JACKSON
CONFINED SPACE POLICY

Revised 11-25-2020

SECTION I - GENERAL ADMINISTRATIVE INFORMATION

A. Purpose:

It is the responsibility of the City of Jackson to provide the employees a place of employment which is free from recognized hazards that may cause death or serious harm. In providing services to the citizens of Jackson, Tennessee, City employees may be required to enter spaces considered hazardous.

The purpose of this policy is to establish a comprehensive set of procedures and practices to protect employees from the hazards of entry into permit-required or non-permit confined space.

B. Coverage:

The policy is intended to protect all workers from toxic, explosive or asphyxiating atmospheres and from possible engulfment from small particles such as liquids, grain, or sawdust in confined spaces to include tanks, sewer pits, underground chambers, manholes, or any area with limited access and limited atmospheric ventilation. Those high risk occupations include but are not limited to:

1. Paramedics and Emergency Medical Technicians;
2. Public Works Employees;
3. Water and Wastewater Workers;
4. Any other employee deemed to be at high risk per the required confined space determination.
5. Contractors hired to perform work for the City of Jackson in permit-required confined space.

C. Administration:

1. This required confined space policy shall be administered by the City Department Head and/or supervisor over the project, who shall be responsible for coordinating activities with all City of Jackson's departments and outside contractors where necessary.
2. The Department Head, along with the Risk Management Department, and/or contractors, shall also be responsible for evaluating the workplace to determine if any spaces are permit-required confined spaces.
3. There also must be a designated Entry Supervisor for each confined space work site. The Entry Supervisor shall be responsible for determining if acceptable entry conditions are present at a permit site where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required.
4. Each confined space entry site must also have Attendants and Authorized Entrants. The Attendant is an individual stationed outside one or more permit spaces, who monitors the Authorized Entrant and who performs all attendant's duties in the permit space program. The Authorized Entrant is a person who is authorized to enter a permit space.

SECTION II – ENTRANTS, ATTENDANTS, AND ENTRY SUPERVISORS

A. Policy Statement:

Three categories of workers have specific duties whenever work is performed in a permit space: authorized entrants; attendants, and entry supervisors. The entry employer is responsible for ensuring that these workers carry out those duties.

The permit shall also contain the rescue and emergency services that can be summoned and the means for summoning, in addition to a list of personal protective and communication equipment.

B. General Guidelines:

An **authorized entrant** is a worker who is authorized by the entry supervisor to enter a permit space.

An **attendant** is an individual stationed outside one or more permit spaces who monitors conditions within the space(s) and prevents unauthorized entry.

An **entry supervisor** is a qualified person (such as the employer, foreman, or crew chief) responsible for overseeing entry operations. 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 standard for each role he or she fills. The duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

Authorized Entrants must:

1. Know space hazards, including information on the means of exposure such as inhalation or skin contact, and symptoms of the exposure;
2. Use appropriate personal protective equipment properly;
3. Stay in communication with attendants as necessary to enable the attendants to monitor the entrant's status and alert the entrant to evacuate when necessary;
4. **Exit from the permit space as soon as possible when: (1) Ordered by the attendant or entry supervisor; (2) He or she recognizes the warning signs or symptoms of exposure; or (3) An automatic alarm is activated.**
5. Alert the attendant when a prohibited condition exists or when warning signs or symptoms of exposure exist. The attendant must:
6. Remain outside the permit space during entry operations unless relieved by another authorized attendant;

Attendants must:

1. Perform non-entry rescues when specified by the employer's rescue procedure;
2. Know existing and potential hazards, including information on the mode of exposure, and signs or symptoms, and consequences, and possible behavioral effects of exposure;
3. Maintain communication with and keep an accurate account of those workers entering the permit space;
4. Assess conditions inside and outside the space and order evacuation of the permit space when: (1) A prohibited condition exists; (2) A worker shows behavioral effects of hazard exposure; (3) A situation exists outside the confined space that

could endanger entrants; or (4) The attendant cannot effectively and safely perform required duties.

5. Summon rescue and other services during an emergency;
6. Ensure that unauthorized people stay away from permit spaces or exit immediately if they have entered the permit space;
7. Inform authorized entrants and the entry supervisor if any unauthorized person enters the permit space; and
8. Perform no other duties that interfere with the attendant's primary duties.

Entry Supervisor must:

1. Know space hazards including information on the mode of exposure, signs or symptoms and consequences;
2. Verify that specified entry conditions are satisfied, including permits, tests, procedures and equipment before allowing entry;
3. Terminate entry and cancel or suspend permits when entry operations are completed or if a condition that is not allowed under the permit arises;
4. Verify that rescue services are available and that the means for summoning them are operable;
5. Take appropriate measures to remove unauthorized entrants; and
6. Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained.

Definitions:

1. **Acceptable Entry Conditions:** The conditions that must exist in a permit space to allow entry and to insure that employees involved can safely enter into and work within the space.
2. **Confined Space:**
 - a. Large enough and so configured that employees can bodily enter and perform assigned work and;
 - b. Has a limited or restricted means for entry or exit, and;
 - c. Is not designed for continuous occupancy.
3. **Engulfment:** The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.
4. **Entry:** Means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
5. **Entry Permit:** Means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified by this standard.
6. **Hazardous Atmosphere:** An atmosphere that may expose employees to a risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness

from one or more of the following:

- a. Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
 - b. Airborne combustible dust at a concentration that meets or exceeds its LFL;
 - c. Atmosphere oxygen concentration below 19.5 percent or above 23.5 percent;
 - d. Atmosphere concentration of any substance for which a dose or permissible exposure limit;
 - e. Any other atmospheric condition that is immediately dangerous to life or health.
7. **Non-Permit Confined Space:** A confined space that does not contain hazards or has the potential to contain any hazard capable of causing death or serious physical harm.
8. **Permit-Required Confined Space:** A confined space that has one or more of the following characteristics:
- a. Contains or has the potential to contain a hazardous atmosphere;
 - b. Contains a material that has the potential for engulfing an entrant;
 - c. 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; or
 - d. Contains any other recognized serious safety or health hazard.
9. **Permit-Required Confined Space Program:** The employer's overall program for controlling, and, where appropriate, for protecting employees from permit space hazards and for regulating employee entry into permit spaces.

SECTION III - GENERAL POLICIES AND PROCEDURES

A. Policy Statement:

In compliance with the Permit-Required Confined Space Entry standard, the City of Jackson, shall identify all permit-required confined spaces in the workplace, prevent unauthorized entry into them, protect authorized workers from hazards, establish entry procedures, establish appropriate training for authorized entrants, entry supervisors, attendants, and document compliance. Provide each authorized entrant or employee representative with the opportunity to observe any monitoring or testing of permit spaces, and make available to all affected employees and authorized representatives all information required to be developed as required by the confined space standard.

B. General Guidelines:

1. Where permit spaces are located, notice of danger shall be posted where appropriate. Signs reading "**DANGER - PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER**" will be posted.
2. It shall be a violation of the City of Jackson's safety procedures for employees to enter confined space without proper authorization. Violation of this policy shall

- result in disciplinary action up to and including possible termination.
3. If the City of Jackson can demonstrate that the only hazard posed by the permit space is an actual or potential hazardous atmosphere and if it can be demonstrated that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry and if monitoring and inspection data support such conditions, then entry can be made according to the following requirements.
 - a. An condition 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 protect employees working in the space from foreign objects from entering the space.
 - c. Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct reading instrument for oxygen content, flammable gases and vapors, and potential toxic air contaminations.
 - d. There may be no hazardous atmosphere within the space whenever any employee is inside the space.
 - e. Continuous forced air ventilation shall be used and the atmosphere within the space shall be periodically tested as necessary to ensure the continuous forced air ventilation is preventing the accumulation of hazardous atmosphere or the forced air ventilation is so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space. The forced air ventilation shall be from a clean source and cannot increase the hazards in the space.
 - f. The atmosphere within the space shall be periodically tested, as necessary, to ensure that the continuous forced air ventilation is preventing the accumulation of hazardous atmosphere.
 - g. If a hazardous atmosphere is detected during entry, each employee shall leave the space immediately, the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect the employees from the hazardous atmosphere before any subsequent entry takes place.
 4. The City of Jackson shall provide the following equipment, as needed, at no cost to the employees, and shall maintain the equipment properly, and ensure the equipment is used properly:
 - a. Testing and monitoring equipment;
 - b. Ventilating equipment needed to obtain acceptable entry conditions;
 - c. Communications equipment needed for compliance;
 - d. Personal protective equipment;
 - e. Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency;
 - f. Barriers and shields;

- g. Equipment such as ladders, needed for safe entry and exit;
 - h. Rescue and emergency equipment;
 - i. Any other equipment needed for safe entry into and rescue from permit spaces.
5. City Department Head and/or supervisor over the project, shall evaluate permit space conditions when entry operations begin by:
 - a. Testing conditions in the permit space to determine if acceptable entry conditions exist before an entry is authorized to begin;
 - b. Testing or monitoring the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations.
 6. When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then toxic gases and vapors.
 7. The City Department Head and/or supervisor over the project, shall provide at least one attendant outside the permit space into which entry is authorized for the duration of the entry operations.
 8. When multiple spaces are to be monitored by a single attendant, the appropriate communication equipment shall be available to enable the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distraction from the attendant's responsibilities.
 9. If at any time there is a questionable action or non-movement by the worker inside, there will be a verbal check made. If there is no response, the worker will be removed immediately. **EXCEPTION:** If the worker is disabled due to falling or impact, he/she shall not be removed from the confined space unless there is immediate danger to his/her life.
 10. Chest harness with attached life-line shall be used by all workers entering the space with the free end of the line secured outside the entry opening. The attendant (standby worker) shall attempt to remove a disabled worker via his life-line. The attendant is not permitted to enter the workspace to perform rescue.
 11. When practical, confined spaces will be entered through side openings - those with 3 1/2 ft. or (1.07 m) of the bottom. When entry must be made through a top opening, the safety belt shall be of the approved type that suspends a person upright and an approved hoisting device or similar apparatus shall be available for lifting workers out of the space.
 12. In any situation where the use of the harness equipment may endanger the worker, use of a hoisting device or safety belt and attachment life-line may be disconnected.
 13. When dangerous air contamination is attributable to flammable and/or explosive substance, lighting and electrical equipment shall be Class 1, Division 1 rated per National Electrical Code and no ignition source shall be introduced into the space.
 14. Continuous gas monitoring shall be performed during all confined space operations. If alarm conditions change adversely, entry personnel shall exit the confined space and a new confined space permit issued.
 15. A permit-required space may be reclassified as a non-permit space if:

- a. The permit space possesses no potential or actual atmospheric hazards and if all hazards within the space are eliminated;
 - b. If testing and inspection during that entry demonstrates that the hazard within the space have been eliminated, the permit may be reclassified as a non-permit confined space for as long as the hazard remains eliminated.
16. When there are changes in the use or configuration of a non-permit confined space that might increase the hazard to entrants, the employer shall re-evaluate that space and if necessary reclassify it as a permit-required confined space.
17. A space classified as a permit-required confined space may be reclassified as a non-permit confined space if the permit required space poses no actual or potential atmosphere hazards and if all hazards within the space eliminated without entry into the space. The permit space may be reclassified as a non-permit confined space as long as the non-atmospheric hazards remain eliminated. If a workplace contains a permit space or spaces, the employer must inform workers in the vicinity of the location of the danger posed by each space. This can be done by posting warning signs like that to the right at each possible point of entry, or by other equally effective means. In addition to posting warning signs, an employer who learns about a permit space must also notify its employees' authorized representative and the controlling contractor of the location and danger of the space. The controlling contractor must then notify other employers on the site, whose activities could create a hazard in the permit space, of the presence and location of such spaces and the hazards associated with them before workers enter the space.
18. When the City of Jackson arranges to have employees, of another employer (contractor) perform work that involves permit space entry, the City of Jackson shall:
 - a. Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with permit space entry program;
 - b. Apprise the contractor of the elements, including the hazards identified and the City of Jackson experience with the space, that make the space in question permit required;
 - c. Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;
 - d. Coordinate entry operations with contractor when both City of Jackson employees and contractor personnel will be working in or near permit spaces;
 - e. Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazard confronted or created in permit spaces during entry operations.

SECTION IV - PRE-ENTRY

A. Policy Statement:

Before entry is authorized, the supervisor shall document the completion of measures to insure safe permit space entry operations by specifying acceptable entry conditions, isolating the permit space, ventilating the space to eliminate or control atmospheric hazards, providing barriers as necessary and verifying that conditions in the permit or non-permit space are acceptable for entry.

B. General Guidelines:

1. Equipment preparation prior to isolation of the equipment requiring an entry is required. Every effort must be made to clean and purge the area of any hazardous contents. This should be done until atmospheric testing indicates levels are below any concentration which could cause physical or health hazards.
2. Equipment isolation is to be accomplished by utilization of appropriate lock out/tag out and line breaking procedures.
3. Testing before entry for oxygen levels, flammability, and/or any contaminants that might have a potential to be present is required. The test must be performed by qualified personnel using equipment that has been checked for proper functions.
4. Testing must be done throughout the entire portion of the space that work will occupy during the entry. This testing must be done without the use of a ventilation system. The atmosphere must be tested at various levels, since some gases and vapors are lighter or heavier than air which can result in a layering effect.
5. The following conditions must be met before the atmosphere is considered safe:
 - a. An "LFL" reading between 0 and 10 percent;
 - b. An oxygen level between 19.5 percent and 23.5 percent;
 - c. An airborne combustible dust at a concentration that obscures vision at a distance greater than 5 feet;
 - d. An atmospheric concentration of a substance less than the permissible exposure limit.
6. Entry into the confined space is prohibited until these conditions are all met, or until special protective measures are provided.
7. Testing must be performed just prior to commencement of the entry and before re-entry if the workers have left the site for an extended time period (15-20 minutes).

SECTION V - TRAINING

A. Policy Statement:

Before any worker works in a permit space, the entry employer must train authorized entrants, attendants, entry supervisors, and other employees with duties under the standard (such as persons who test and monitor the atmosphere in a permit space) to understand the hazards in the permit space and the methods used to protect against those hazards. If a worker is not authorized to perform entry rescues, the training must include the dangers of attempting such rescues. All training must be provided at no cost to

workers. After the training, the employer must ensure that the workers have the understanding, knowledge and skills necessary to safely perform their assigned duties.

B. General Guidelines:

1. The Safety Officer shall provide training so that all employees acquire the understanding, knowledge and skills necessary for the safe performance of the duties assigned them. Training shall contain hazard recognition, use of personal protective equipment, self-rescue techniques, any special work practices or procedures needed to perform work in the confined space safety, lock out/tag out procedures for equipment and use of atmospheric equipment.
2. Training shall be provided to each effected employee before the employee is first assigned duties under this policy; before there is a change in assigned duties; whenever there is a change in permit space operations that present a hazard about which an employee has not been previously trained and whenever the Supervisor/Department Head has reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of the procedures.
3. Training shall establish employee proficiency in the duties required and shall introduce new and revised procedures as necessary for compliance with the program.
4. The Safety Officer will certify that the training has been accomplished. The certification shall contain each employee's name, the signature or initials of the trainers, and dates of training. The certification shall be available for inspection by employees and their authorized representatives.
5. Any employee required or permitted to pre-check or enter an enclosed/confined space shall have successfully completed, as a minimum, the training as required by this section of the procedures.
6. Employees shall not perform any entry space tasks until the employee has been certified as posing the appropriate skills.
 - a. Authorized Entrants must be trained to recognize confined space hazards, including the information on the mode of exposure, signs or symptoms, and consequences of exposure, proper use of personal protective equipment, use of communication equipment, and procedures for exiting a permit space.
 - b. Attendants must be trained to remain outside permit spaces during operations; perform non-entry rescues; recognize exit and potential hazards; use of communication devices; when to order evacuation of a permit space; and when to summon rescue and other emergency services.
 - c. Entry Supervisor must be trained to recognize space hazards; verification of emergency plans, testing, permits, procedures and equipment; when to terminate entry and when to cancel permits.

Precautions Required	Permit Required Space	Alternate Procedures Space
Written Permit Space Program Meeting Requirements of Sections 1926.1204-1206	Yes	No
Worker Training Meeting Section 1926.1207	Yes	Yes
Duties of Authorized Attendants (Section 1926.1208), Attendants (Section 1926.1209), and Entry Supervisors (Section 1926.1210)	Yes	No
Rescue and Emergency Services (Section 1926.1211)	Yes	No
Information exchange between controlling contractor and entry employer(s) (Section 1926.1203(h))	Yes	Yes
Permit Space Warning Signs and Entry Restrictions (Sections 1926.1203(b) and (c))	Yes	Yes

OSHA's website contains other information that will help employers comply with the standard ([www.osha.gov/ confined spaces](http://www.osha.gov/confined_spaces)), including fact sheets and FAQs developed for the construction rule. The standard for construction work is similar to the standard regulating confined spaces in general industry (29 CFR § 1910.146), and information on OSHA's website addressing the General Industry standard will therefore be useful in complying with the Construction standard. In particular, OSHA's Confined Spaces Advisor for the General Industry standard (www.dol.gov/elaws/confined.htm) offers a computer-based, step-by-step guide to compliance as well as explanations of key terms used in the standard. All provisions of the standard or alter the compliance responsibilities set forth in the standard, which is published at 29 CFR §§ 1926.1200-1213. The reader must refer to the standard itself, which is available on OSHA's website and in the Code of Federal Regulations, to determine all of the steps that must be taken to comply with the standard.

Attachments:

Confined Space Evaluation Form

Confined Entrant/Attendant Log

Confined Space Entry Permit (If applicable)

CONFINED SPACE EVALUATION FORM

SPACE LOCATION: _____
SPACE DESCRIPTION: _____

Complete this form for any space which may be considered a confined space.
A confined space is defined as having all characteristics listed in #1 through #3 below.

- YES NO 1. Is the space large enough and shaped so an employee can enter and work?
 YES NO 2. Does the space have a limited or restricted means for entry or exit?
 YES NO 3. Is the space NOT designed for continuous employee occupancy?

If the answers to all questions #1 through #3 above are "YES", then the space is a **Confined Space**.
Continue with questions A through E below to determine if and what type of permit is required to enter.

- YES NO A. Does the space contain, or have the potential to contain, a hazardous atmosphere, i.e., oxygen deficiency, flammable vapors, toxic gases or dusts, etc., or pipes, ducts, vents or other entry points for potentially hazardous substances, or will volatile chemicals be used, or will painting or other work that could create a breathing hazard be performed?

Specify potential or known hazards: _____

- YES NO B. Does the space contain a material with the potential for engulfment of a worker, e.g., grain, sand or water?

Specify potential or known hazards: _____

- YES NO C. Does the space have an internal configuration that might cause a worker to become trapped or asphyxiated by inwardly converging walls, floors that slope downward and tapers to a smaller cross section?

Specify potential or known hazards: _____

- YES NO D. Does the space contain other recognized safety or health hazards, such as: *(check all that apply)*
- ___ Mechanical hazards;
 - ___ Exposed or vulnerable electrical wires or energized equipment;
 - ___ Gas or chemical lines
 - ___ Special hazards related to elevation or falling; or
 - ___ Temperature extremes/heat stress

Specify potential or known hazards: _____

- YES NO E. Will welding, cutting, torch work or other hot work be performed?

Specify potential or known hazards: _____

If you answered "NO" to all questions A through E, then the space is a **Non-Permit Required Confined Space**.
If you answered "YES" to question A, then classify the Permit as an **Alternate Entry**, depending on the ability to adequately ventilate the space.

If you answered "YES" to question B, C or D, then classify the space as a **Permit Required Confined Space**

If you answered "YES" to question E, then complete and include a **Hot Work Permit**

If you answered "YES" to question E, then question A, must also be answered as "YES"

Name: _____ Signature: _____
Department: _____

CONFINED SPACE ENTRY PERMIT

GENERAL INFORMATION:

Place to be entered: _____

Purpose of entry: _____

Location/Building: _____

Authorized duration of entry: Date: ____ to ____

Time: ____ to ____

PERMIT SPACE HAZARDS

(INDICATE SPECIFIC HAZARDS WITH INITIALS)

- Oxygen deficiency (less than 19.5%)
- Oxygen enrichment (greater than 23.5%) ✓
- Flammable gases of vapors (greater than 10% of LFL) ✓
- Airborne combustible dust (meets or exceeds LFL)
- Toxic gases or vapors (greater than PEL) ✓
- Mechanical Hazards
- Electrical Shock ✓
- Materials Harmful to the skin
- Engulfment ✓
- Other: _____

EQUIPMENT REQUIRED FOR ENTRY

SPECIFY AS REQUIRED:

- Personal Protective Equipment: _____
- Respirator Protection: _____
- Atmospheric Testing/Monitoring: _____
- Communication: _____
- Rescue Equipment: _____
- Other: _____

PREPARATION FOR ENTRY

CHECK AFTER STEPS HAVE BEEN TAKEN:

Notification of affected Departments of service interruption.

- Isolation methods:
- Lockout/ Tagout Blank/Blind
 - Purge/Clean Inert Ventilate
 - Atmospheric Test Barriers Other

COMMUNICATION PROCEDURES TO BE USED BY ATTENDANTS / ENTRANTS:

Personal Awareness

- Pre-entry briefing on specific hazards and control methods
- Notify Contractors of permit and hazards
- Additional Permits required and / or attached:
 - Hotwork Line breaking Other

AUTHORIZED ATTENDANTS

See Attached Roster

EMERGENCY SERVICE

Name of Service	Phone Number	Method of Contact
_____	_____	_____
_____	_____	_____
_____	_____	_____

AUTHORIZED ENTRANTS

See Attached Roster

TESTING RECORDS

ACCEPTABLE CONDITIONS

		Result	Result	Result	Result	Result	Result	Result
		am-pm	am-pm	am-pm	am-pm	am-pm	am-pm	am-pm
Time								
Oxygen-min	> 19.5%							
Oxygen-max	< 23.5%							
Flammability	< 10%, LEL/ LFL							
H ₂ S	< 10 PPM							
Toxic (specify)								
CL ₂	< 0.5 PPM							
CO	< 35 PPM							
SO ₂	< 2 PPM							
Heat	Def F/C							
Tester Initials								

SUPERVISORS AUTHORIZATION (by entry)

I certify that all required precautions have been taken and necessary equipment is provided for safe entry & work in this Confined Space.

PRINTED NAME

SIGNATURE

DATE

TIME
