

## SSP SPECIFIC HAZARD ATTACHMENT: CONFINED SPACE ENTRY

### CONFINED SPACE

OSHA [per 29 CFR 1910.146, in effect April 15, 1995] requires practices and procedures to protect employees in general industry from hazards of entry into permit required confined spaces (i.e., permit spaces).

RECOGNIZING CONFINED SPACE
A <b>confined space</b> is a <ul style="list-style-type: none"><li>❑ Workplace with a configuration that hinders the activities of any employees who must enter into, work in, and exit from it. These hindrances may involve entrapment, engulfment, or hazardous atmospheric conditions.</li></ul>
A <b>permit-required confined space</b> (permit space) meets the above definition <u>and</u> has one or more of the following characteristics: <ul style="list-style-type: none"><li>❑ Contains or has the potential to contain a hazardous atmosphere.</li><li>❑ Contains a material that has the potential to engulf an entrant.</li><li>❑ Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section.</li><li>❑ Contains any other recognized serious safety or health hazards.</li></ul>

### RESPONSE

Designated On-Scene Safety Officers (DOSSOs) are to be trained in all aspects confined space entry to be able to supervise the emergency services contractor and to maintain command and control of the incident from the standpoint of site and worker safety. **The DOSSO is empowered to delay, interrupt, stop and/or cancel any job when unsafe practices, permit violations or contractor performance warrants such action.**

The DOSSO in concert with the emergency services contractor must evaluate the worksite to determine if that site is a permit-required confined space. If it is, the emergency services contractor must implement the following:

DOSSO FIRST RESPONSE TO PERMIT SPACE
<ul style="list-style-type: none"><li>❑ Ensure that employees are advised of the existence, location and danger posed. Signs can be posted stating: <b>DANGER</b> <b>PERMIT REQUIRED -- CONFINED SPACE</b> <b>AUTHORIZED ENTRANTS ONLY</b></li><li>❑ Take measures to prevent entry.</li><li>❑ Ensure that a written Permit-Space Program exists and is available to employees and their representatives.</li><li>❑ Consider measures to remove the permit space hazard. (e.g., forced air ventilation with monitoring and inspection data)</li><li>❑ Before allowing entry, ensure that the internal atmosphere is tested for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants.</li></ul>

## WRITTEN PROGRAM

The emergency services contractor must develop and implement a written **Permit-Space Program** in its site safety plan.

REQUIRED ELEMENTS OF A PERMIT-SPACE PROGRAM
<ul style="list-style-type: none"><li><input type="checkbox"/> Identification and evaluation of permit-space hazards.</li><li><input type="checkbox"/> Test conditions before and during entry.</li><li><input type="checkbox"/> Perform in sequence tests for the following hazards: oxygen, combustible gases and vapors, toxic gases and vapors.</li><li><input type="checkbox"/> Implement necessary measures to prevent unauthorized entry (post signs, place attendant, secure site).</li><li><input type="checkbox"/> Establish and implement procedures and practices to eliminate or control hazards to safe entry: specify safe entry conditions, isolate permit space, provide barriers, verify acceptable entry conditions, purge, flush, make inert, or ventilate.</li><li><input type="checkbox"/> Identify employee job duties.</li><li><input type="checkbox"/> Provide proper PPE.</li><li><input type="checkbox"/> Place an Attendant outside permit space throughout the entry operation.</li><li><input type="checkbox"/> Coordinate the operation.</li><li><input type="checkbox"/> Implement procedures for summoning rescue and emergency services.</li><li><input type="checkbox"/> Establish, in writing, and implement a system for the preparation, issuance, use and cancellation of entry permits.</li><li><input type="checkbox"/> Review established entry operations and annually revise the permit-space entry program.</li></ul>

## PERMIT SYSTEM

Before anyone enters a permit space, a permit must be posted at the entrance or otherwise be made available to entrants. The permit must be devised by the emergency services contractor and signed by the entry supervisor. It must include verification that pre-entry preparations have been completed and that the space is safe to enter.

## ENTRY PERMITS

Entry permits must not exceed the time required to complete the assignment. Supervisors must terminate entry and cancel permits when the task has been completed or when new conditions exist. New conditions must be noted on the canceled permit. The DEM ER Administrator and the emergency services contractor must keep canceled permits for at least 1 year.

Entry permits must include the following information:

REQUIRED INFORMATION IN AN ENTRY PERMIT
<ul style="list-style-type: none"><li><input type="checkbox"/> Test results.</li><li><input type="checkbox"/> Tester's signature.</li><li><input type="checkbox"/> Name and signature of entry supervisor and site supervisor.</li><li><input type="checkbox"/> Site name, entrants, attendants, supervisors.</li><li><input type="checkbox"/> Purpose of entry and known hazards.</li><li><input type="checkbox"/> Measures to be taken to purge, make inert, ventilate and flush permit space.</li><li><input type="checkbox"/> Date and authorized duration of entry.</li><li><input type="checkbox"/> Acceptable entry conditions.</li></ul>

- Communication procedures and equipment to maintain contact during entry.
- Special equipment and procedures (i.e. PPE, alarms, monitoring).
- Other employee safety information.

## TRAINING AND EDUCATION

Site- and task- specific training is required of entrants, attendants, and supervisors. They are to demonstrate understanding, knowledge and skills necessary for safe performance of their duties. Additional training is required when job duties change, site conditions change or employee's job performance shows deficiencies.

Training certificates must be issued to employees. The certificate must include the employee's name, training date and trainers initials. Upon request, certifications must be made available by the employee, their authorized representatives, and the SOSC.

## DUTIES

AUTHORIZED ENTRANT'S DUTIES
<ul style="list-style-type: none"> <li><input type="checkbox"/> Know space hazards as well as mode, sequence, signs or symptoms of exposure,</li> <li><input type="checkbox"/> Use appropriate PPE.</li> <li><input type="checkbox"/> Maintain communications with attendants.</li> <li><input type="checkbox"/> Exit permit space as soon as possible               <ul style="list-style-type: none"> <li>o when ordered by authorized person,</li> <li>o when entrant recognizes warning signs or symptoms of exposure exist, or</li> <li>o when alarm is activated.</li> </ul> </li> <li><input type="checkbox"/> Alert attendants when prohibited conditions exist</li> <li><input type="checkbox"/> Where appropriate, wear a chest or full body harness with a retrieval line attached to the center of your back, near a shoulder, level or above their heads. Ensure that the other end of the retrieval line is attached to a mechanical device or fixed to a point outside the permit space.</li> </ul>

ATTENDANT'S DUTIES
<ul style="list-style-type: none"> <li><input type="checkbox"/> Remain outside the permitted space until relieved by an authorized attendant.</li> <li><input type="checkbox"/> Perform non-entry rescues.</li> <li><input type="checkbox"/> Know hazards, including modes of exposure, sign and symptoms, consequences and physiological effects.</li> <li><input type="checkbox"/> Maintain communication with entrants and keep an accurate account of personnel working in permit space.</li> <li><input type="checkbox"/> Order evacuation of the permit space               <ul style="list-style-type: none"> <li>o when prohibited condition exists,</li> <li>o when an entrant shows physiological signs of exposure, or</li> <li>o when entrant cannot effectively and safely perform duties.</li> </ul> </li> <li><input type="checkbox"/> Summon rescue during an emergency.</li> <li><input type="checkbox"/> Keep unauthorized persons away from permit space.</li> <li><input type="checkbox"/> Alert entrants and supervisor of entry by unauthorized persons.</li> <li><input type="checkbox"/> Perform no other duties that interfere with primary duties.</li> </ul>

ENTRY SUPERVISOR'S DUTIES
<ul style="list-style-type: none"> <li>❑ Know space hazards, including mode of exposure, signs or symptoms and consequences of exposure.</li> <li>❑ Verify site safety plan and specified entry conditions, such as permits, tests, procedures, and equipment before allowing entry.</li> <li>❑ Terminate entry and cancel permits if a new condition exists or when entry operations are complete.</li> <li>❑ Take appropriate action to remove unauthorized entrants.</li> <li>❑ Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained.</li> </ul>

DOSSO DUTIES
<ul style="list-style-type: none"> <li>❑ <b><u>Do not enter a confined space.</u></b></li> <li>❑ Size-up the incident to determine when a site requires permit-space entry.</li> <li>❑ Supervise the contractor.</li> <li>❑ Maintain command and control of the site and personnel.</li> <li>❑ Insure site and worker safety.</li> <li>❑ Know space hazards including mode of exposure, signs or symptoms and consequences of exposure.</li> <li>❑ Verify site safety plan and specified entry conditions such as permits, tests, procedures, and equipment before allowing entry.</li> <li>❑ Terminate entry and cancel permits when entry operations are completed or if a new condition exists.</li> <li>❑ Take appropriate action to remove unauthorized entrants.</li> <li>❑ Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained.</li> </ul>
<p><b>IN PREPARATION FOR ACCIDENTS ENSURE THAT:</b></p> <ul style="list-style-type: none"> <li>❑ Rescue service personnel are provided with and trained in the proper use of PPE and have had authorized entrants training.</li> <li>❑ At least one rescue team member is certified in CPR and first-aid.</li> <li>❑ Rescuers are informed of hazards of the permit space.</li> <li>❑ A mechanical device is available to retrieve personnel from a vertical-type permit space more than 5 feet deep.</li> </ul>
<p><b>IN CASE OF EXPOSURE:</b></p> <ul style="list-style-type: none"> <li>❑ If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS) or other similar written information is required at the worksite, be sure it is available to the medical facility treating the exposed entrant</li> </ul>