



Confined Space Entry CoW Technical Standard

Version	Date	Approver
1.0	March 31, 2024	JO EHS

Introduction

The Confined Space Entry standard is designed to help prevent illness and injuries to personnel, damage to property or adverse environmental impact when personnel are performing work in confined spaces.

Confined Spaces are defined as spaces large enough and so configured that personnel can bodily enter and perform assigned work, have limited or restricted means for entry or exit and are not designed for continuous occupancy.

This standard defines the requirements for Confined Space Entry.

Requirements

The following sections provide minimum requirements for Confined Space Entry as well as supporting guidance to clarify the intent of those requirements.

- Requirements of this Standard **shall** be met.
- Guidance in this Standard **may** be used as an aid to develop local documents that meet or exceed Control of Work (CoW) requirements. If examples are provided within guidance sections, they are not meant to represent the only acceptable means for meeting a requirement. WJO may develop or utilize other suitable methods not discussed in this document as long as the requirements are met. Implementation of guidance is not auditable.

	<ul style="list-style-type: none"> e. Availability of at least one member of the rescue team or service who is trained and competent in basic first aid and CPR. f. Ability of rescuer to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified. g. Provide the rescue personnel access to the space from which rescue may be necessary. h. Availability of mechanical devices to retrieve personnel from vertical spaces more than 5 feet (1.52 m) deep. i. Method to verify the competency of rescue personnel. <p>Guidance: WJO should verify training and competency of rescuers prior to Confined Space Entry. Methods to verify competency could include training documents, drill records (training drill performed at a minimum annually), etc.</p> <p>Rescue teams should be provided the opportunity to assess the physical confined space as necessary (potentially including entry) prior to the Confined Space entry work to be performed, as well as any other available information that may assist in developing the rescue plan (e.g., P&IDs, drawings, etc.).</p> <p>WJO may have some of the above requirements listed in their Emergency Action Plan, training and competency process, COEM, or part of their permitting process. If the information is documented in another document, the information does not need to be listed on the Rescue Plan itself.</p>
<p>9. Requirement:</p>	<p>The following shall be met to reclassify a Permit-Required Confined Space.</p> <ul style="list-style-type: none"> a. The characteristics that made the space a permit required confined space shall be eliminated. b. Work conducted within the confined space shall not create a hazardous atmosphere or condition. c. Affected personnel shall be notified that the space has been reclassified. d. Documentation, including updated hazard analysis, authorizing the space to be reclassified shall be approved. <p>If special hazardous characteristics arise in a reclassified confined space, all authorized entrants shall exit the confined space, and the space shall be reevaluated to determine how it will be classified.</p>
<p>10. Requirement:</p>	<p>Confined Space Entry work shall be stopped/suspended, and all authorized entrants shall exit the space in the following circumstances:</p> <ul style="list-style-type: none"> a. The attendant leaves the Confined Space Entry area without a qualified replacement.

	<ul style="list-style-type: none"> b. Entry conditions exceed acceptable limits or limits stated on the permit. c. There is a change in isolation points. d. There is an equipment failure. e. An order to evacuate is given by the attendant or entry supervisor. f. An authorized entrant recognizes any warning signs or symptoms of exposure. g. A facility emergency evacuation alarm is sounded. h. An incident and/or near miss occurs. i. Unexpected change of conditions or job scope j. Loss of communication between the entrant and attendant <p>Guidance: The types of equipment that may fail include gas testing equipment, ventilation system, etc.</p> <p>A remote attendant (attendant using camera-based technology) may still be considered an attendant.</p>
<p>11.</p> <p>Requirement:</p> <p>Guidance:</p>	<p>Entry into inert atmosphere confined spaces shall only be allowed after alternative options have been evaluated and entry has documented approval by a WJO Area Manager.</p> <ul style="list-style-type: none"> • WJO Division shall develop specific inert entry procedures and controls that shall be implemented and followed. • Specialized rescue plans shall be developed and followed. <p>Inert atmospheres require specialty sensors, especially lower explosive limit (LEL) including infrared sensors or dilution tubes shall be used.</p> <ul style="list-style-type: none"> • The qualified gas tester (QGT) shall ensure that inert testing is performed in a manner that properly characterizes the flammability of a confined space. <p>Documents such as <i>Chevron's Inert Entry Process</i>, <i>Inert Entry Safeguard Verification Checklist</i>, and <i>Inert Entry Plan Approval</i> sheet should be referenced when developing procedures and executing inert entry work.</p> <p>During the planning phase and throughout the task, consider utilization of subject matter experts for inert entry including specialty contract companies.</p>
<p>12.</p> <p>Requirement:</p>	<p>Gas cylinders (with the exception of breathing air cylinders) shall:</p> <ul style="list-style-type: none"> a. Not be taken into confined spaces. b. Gas cylinder valves shall be closed when not in use. c. Gas supply lines shall be removed from confined space or disconnected when not in use unless space

		is being continuously monitored for hazardous atmospheres.
	Guidance:	Small handheld cans such as dye penetrant, handheld propane torch, compressed air, etc. can be used with approval of permit issuer.
13.	Requirement:	Personnel conducting activities associated with Confined Space Entry shall meet the training and competency requirements that apply to their roles, in accordance with the Training and Competency CoW Standard.
14.	Requirement:	Documentation associated with Confined Space Entry shall adhere to the record retention requirements detailed in the Control of Work Process.
15.	Requirement:	An annual documented review of the Confined Space Program shall be conducted to assess the need for program revision and/or Confined Space Entry execution improvement.
	Guidance:	This review should include permits from Permit-Required Confined Space Entries, interviews with personnel performing Confined Space Entries, verification and validation data, and representative samples of rescue plans. An annual documented review may be done in conjunction with an annual audit.

Appendix A: Terms and Definitions

Term	Definition
Acceptable Entry Conditions	The conditions that must exist in a space to facilitate a worker's safe entry into and work within a confined space.
Confined Space	A space that is: <ol style="list-style-type: none"> 1) large enough and configured such that an employee can bodily enter and perform assigned work; and 2) has limited or restricted means for entry or exit; and 3) is not designed for continuous occupancy.
Confined Space Entry	The act of passing any part of a person's body through the opening into a confined space where the point of entry is large enough to allow full bodily entry. Entry is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into that space.
CoW Documentation	Documents that are needed for work to proceed and that are accessible to all the affected personnel. Examples would include but are not limited to: work permits, hazard analysis, rescue plans, PPE matrix, etc.
Reclassified Confined Space	A Confined Space that was previously classified as a Permit-Required Confined Space, that no longer contains special hazardous characteristics.
Entry Log	A log that includes the name of the entrants and times they entered and exited the confined space.
Hazardous Atmosphere	An atmosphere that may expose workers to the risk of death, incapacitation, impairment of ability to self-rescue, injury or acute illness.
High-Level Approver	Person with the competency and authority to make a risk-based evaluation and determine whether proposed deviations from a CoW requirement and alternate controls adequately reduce risk and allow safe execution of work. WJO will typically consider this to be the Division Team Leader or Superintendent, but this can be escalated up based upon the risk of the task, requirement, and/or deviation.
Inert Atmosphere	An atmosphere consisting primarily of an inert gas such as nitrogen or carbon dioxide that is effectively oxygen-free.
Non-Permit Required Confined Space	A Confined Space which does not contain special hazardous characteristics.
Permit-Required Confined Space / Hazardous Characteristics	A space that meets all the criteria of a Confined Space and has one or more of the following characteristics (equivalent to the OSHA definition of a permit-required confined space): <ol style="list-style-type: none"> 1) Contains or has the potential to contain potentially hazardous atmosphere.

Term	Definition
	<ul style="list-style-type: none"> 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 that slopes downward and tapers to a smaller cross section; or 4) Contains any other recognized serious potential safety or health hazard. <ul style="list-style-type: none"> • A hazard defined as something that could cause harm or would interfere with the entrant's ability to perform self-rescue.
SIMOPS	Simultaneous Operations

Appendix B: Roles and responsibilities

Role	Definition	Responsibilities
Authorized Entrant	Personnel trained and authorized to enter the specific confined space.	<ul style="list-style-type: none"> • Understands and adheres to permit conditions. • Understands when to stop work. • Understands the work plan and the hazards involved. • Always maintains communication with the attendant, per the agreed method. • Logged on the tracking system when entering and exiting the confined space
Attendant	<p>An individual stationed outside one or more permit-required confined space(s) who monitors the authorized entrants.</p> <p>Attendants are also commonly referred to as an Entry Watch, Hole Watch, or Entry Attendant.</p>	<ul style="list-style-type: none"> • Controls access and egress of personnel into and out of confined spaces • Maintains a documented log of personnel in the confined space. • Monitors personnel and conditions inside the confined space • Maintains communications with personnel inside the confined space. • Understands when to stop work and order evacuation of confined space. • Maintains awareness of potential hazards in Confined Space and their related effects • Understands the planned work and emergency notification procedures. • Remains outside the permitted confined space while personnel remain inside or until relieved by another attendant. • Performs no duties that might interfere with the primary duty to assess and protect the authorized entrants
Entry Supervisor	The person responsible for determining if acceptable entry conditions are present in a confined space where entry is planned, for authorizing entry and overseeing entry operations and for terminating entry as required.	<ul style="list-style-type: none"> • Understands the planned work and emergency notification procedures. • Supports and assists the Attendant. • Monitors work in progress to verify conformance with procedures, permits and hazard analysis documents. • Understands when to stop work

Appendix C: References

Internal References

WJO Control of Work CoW Process
WJO Hazard Analysis CoW Standard
WJO Work Authorization CoW Standard
WJO Training and Competency CoW Standard

External References

American National Standards Institute (ANSI) / American Society of Safety Professionals (ASSP)

Z117.1 Safety Requirements for Confined Spaces

American Petroleum Institute (API)

Standard 2015 Safe Entry and Cleaning of Petroleum Storage Tanks

Australian Standards (AS)

AS 2865 Confined Spaces

International Association of Oil & Gas Producers (IOGP)

Report No. 577 Fabrication site construction safety recommended practices

Report No. 459 Life-Saving Rules

National Fire Protection Association (NFPA)

350 Guide for Safe Confined Space Entry and Work

Occupational Safety & Health Administration (OSHA)

OSHA 1910.146 Permit-required confined spaces

OSHA 29 CFR Part 1926 Confined Spaces in Construction

OSHA 1216.1208 Duties of Authorized entrants

OSHA 1926.1209 Duties of attendants

United Kingdom (UK) Statutory Instruments

1997 No 1713 Work in Confined Spaces

1997 No 3243 Management of Health and Safety at Work Regulations