Confined Space Entry

Standard

1. PURPOSE

The Confined Space Entry Standard establishes the minimum requirements for preparing and performing Confined Space Entry (CSE). The Standard allows for permit-required as well as non-permit confined spaces, and addresses alternate entry requirements.

2. SCOPE

This Standard is applicable to employees of Expand Energy (EXE), its affiliates or subsidiaries who are exposed to confined space hazards on EXE properties or on the company's behalf.

Contractors **shall** have their own Standards that meet or exceed regulatory requirements.

3. DEFINITIONS

Attendant – An individual stationed outside a confined space who monitors the entrants and performs all attendants' duties.

Alternate Entry – Entry procedures that may be followed when the only hazard posed by a confined space is an actual or potential hazardous atmosphere, and that hazard can be controlled with continuous forced air ventilation.

Authorized entrant - An individual trained and authorized by the employer to enter a permit space.

Confined Space – A space that:

- is large enough for an employee to enter fully and perform work
- has limited or restricted means for entry or exit
- is not designed for continuous human occupancy

Examples of confined spaces include but are not limited to pressure vessels, tanks, silos, hoppers, pipelines, etc**.**

Entry Supervisor – The person responsible for determining if acceptable entry conditions are present at a confined space, for authorizing and overseeing entry operations, and for terminating the entry**.**

Immediately Dangerous to Life and Health (IDLH) - Means an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

Non-Permit Confined Space (Non-Permit Space) - A confined space that does not contain or have the potential to contain any hazard, including atmospheric**.**

Permissible Exposure Limit (PEL) - The permissible exposure limit (PEL) is a set by OSHA for how much exposure a worker can have to a chemical substance or physical agent like noise. These limits are based on an 8-hour time-weighted average, meaning a worker's average exposure over an 8-hour workday should not exceed the PEL.

Permit-Required Confined Space (Permit Space) – A confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an Entrant
- 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
- Contains any other recognized serious safety or health hazard

Rescue Service - Means the personnel designated to rescue employees from permit spaces and have the required training.

Shall – Denotes a minimum requirement to conform to the Standard. To aid the reader, “shall” requirements are identified in bold. Any deviation from a minimum requirement must be approved via the Standard Exception Form.

Should – Denotes a recommendation, or that which is advised, but not required to conform to the Standard.

4. ROLES & RESPONSIBILITIES

SUPERVISOR

- Ensure training requirements of this Standard are met.
- Ensure confined spaces in their area of responsibility are identified and employees are informed of their existence and hazards.

ENTRY SUPERVISOR

- Identify hazards of each confined space and the controls to mitigate them.
- Ensure communication of identified or known potential hazards to all personnel who are entering confined spaces.

- Determine if a confined space is permit-required, non-permit space or alternate entry procedures will be utilized and document on Permit Form.
- Ensure applicable energy isolation procedures are implemented.
- Conduct the pre-entry meeting.
- Establish means of summoning rescue services.
- Ensure personnel have current training for their assigned duties.

ATTENDANT

- Remain outside the permit-required confined space at all times unless relieved by another authorized Attendant.
- Establish method to maintain constant communication with Entrants.
- Monitor Entrants as they enter/exit the confined space.
- Understand the potential hazards internal to the confined space.
- Monitor atmospheric conditions inside the confined space and communicate any changes to the entrants.
- Issue an evacuation order if necessary.
- Summon rescue personnel, if needed.
- Ensure that unauthorized persons do not enter the confined space or working area.

AUTHORIZED ENTRANT

- Understand the hazards associated with the entry, and the controls needed to safely proceed.
- Maintain communication with the Attendant throughout the work period.
- Exit the confined space, if necessary, in the event of a hazardous situation, or when instructed to do so by the Attendant.
- Alert the Attendant when a prohibited condition exists or when warning signs or symptoms of exposure exists.

ATMOSPHERIC TESTER

- Understand how to properly operate the gas analyzer and ensure that it is calibrated and functioning.
- Know the hazards of the confined space and how to properly conduct tests in areas the entrants will access.
- Interpret and communicate results to entry supervisor and entry team.

HSER

- Assist with the identification/classification of confined spaces.
- Conduct an annual review of permits used for confined space entries.
- Conduct confined space entry training.
- Serve as a technical resource as needed to support the implementation of this Standard.

5 REQUIREMENTS

5.1 GENERAL REQUIREMENTS

Entry into a confined space may be performed by following one of three different processes, depending upon how the confined space is categorized:

- Non-Permit Confined Space
- Alternate Procedures Confined Space
- Permit Required Confined Space

Classifying or re-classifying confined spaces **shall** only be performed by properly trained persons (typically Entry Supervisors and HSER).

A JSA **shall** be completed prior to any confined space entry activities.

All locations **shall** be surveyed to identify confined spaces that could be entered without needing tools or keys to open. If such spaces exit, they **shall** be marked by posting danger signs or labeling (e.g., Danger – Confined Space Do Not Enter, or similar) or other effective means of communicating their existence and location.

To aid in identifying confined spaces, see the Confined Space Determination flow chart below in Figure 5.1.1:

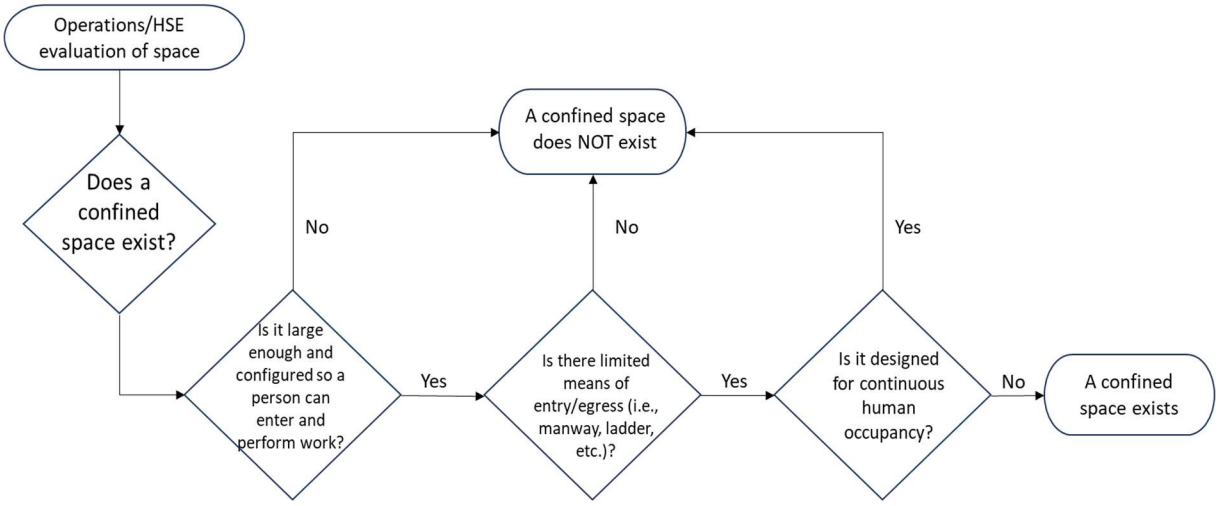

Figure 5.1.1 Confined Space Determination

All confined spaces **shall** be considered hazardous until deemed to be nonhazardous during a classification and permitting process. The Confined Space Classification Process Flow in Figure 5.1.2 (below) is used to determine if the confined space is a permit-required confined space or a non-permit confined space. (See Section 5.3 for Alternative Entry).

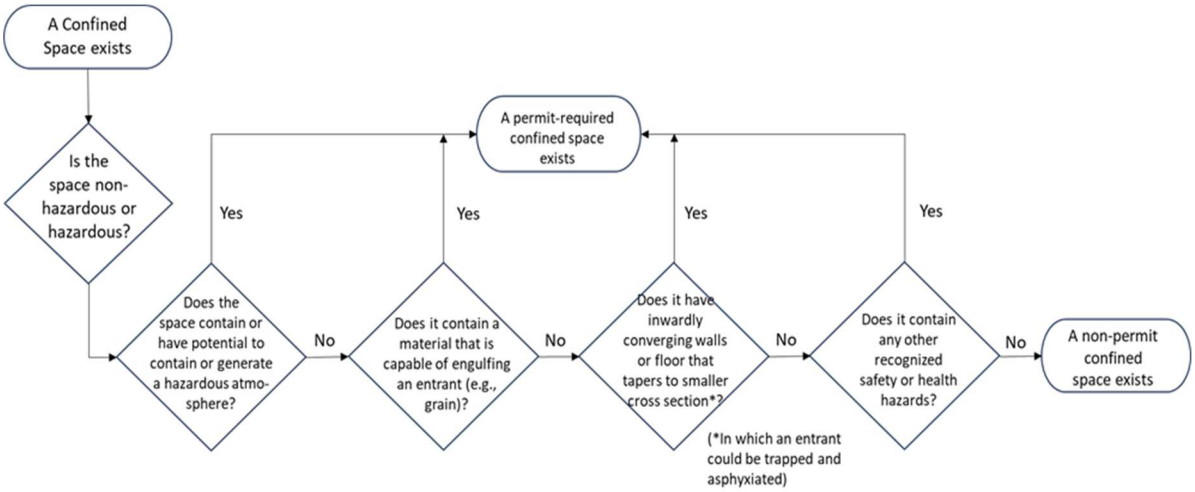

Figure 5.1.2 Confined Space Classification

5.2 Non-Permit Confined Space

Non-permit confined spaces do not contain any of the four criteria that constitute a hazardous confined space in figure 5.1.2. Additionally, a confined space that has been classified as permit-required may be reclassified as a non-permit space by demonstrating:

- The space poses no actual or potential atmospheric hazards, and
- All other hazards associated with the space are eliminated without entry into the space.

If it is necessary to enter the permit space to eliminate hazards, entry **shall** be performed under permit space requirements. If testing and inspection during that entry demonstrate the hazards within the permit space have been eliminated, it may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

Control of atmospheric hazards through forced air ventilation alone does not constitute elimination of the hazard (and thus does not allow for Non-Permit Entry). See 5.3 *Alternate Entry Requirements* for requirements at confined spaces where the only hazard posed is an actual or potential hazardous atmosphere.

Entry Supervisors **shall** determine the classification of confined spaces. All reclassified non-permit spaces **shall** document the basis for determining that all hazards in the permit space have been eliminated, using the Confined Space Entry Permit (HSER-SAF-EXE-FRM-033). The written certification **shall** be made available to each Entrant before entering the space. If hazards arise within a permit space that has been reclassified to a non-permit space, each employee in the space **shall** exit. The space **shall** then be reevaluated and determined whether it must be reclassified as a permit space.

5.3 Alternate Entry Requirements

For confined spaces where the only hazard posed is an actual or potential hazardous atmosphere which can be mitigated with continuous forced air ventilation, alternate entry procedures may be utilized. Entry Supervisors **shall** determine the classification of confined spaces.

When using alternate entry procedures, pre-entry atmospheric testing **shall** be performed with a calibrated, active air sampling unit (pump operated) equipped with an extendable wand or sufficient air sampling hose to extend into the confined space to the location where persons will be working.

All persons who enter the space **shall** be provided an opportunity to observe the pre-entry testing. There **shall** be no hazardous atmosphere within the space whenever a person is inside.

The results of pre-entry atmospheric testing **shall** be documented using the Confined Space Entry Permit (HSER-SAF-EXE-FRM-033) and **shall** be made available to each person before entering the space.

Atmospheric monitoring and forced air ventilation **shall** be continuous while persons are working in the confined space. Additionally, means of suitable emergency egress **shall** be always maintained while persons are in the confined space.

Alternate entry confined spaces do not require an attendant.

When conducting alternate entry procedures, if a hazardous atmosphere is detected while persons are working in the space:

- Each person **shall** exit the space immediately
- The space **shall** be evaluated to determine how the hazardous atmosphere developed
- Measures **shall** be implemented to protect entrants from the hazardous atmosphere before another alternate entry or permit-required entry can be performed

5.4 Permit-Required Confined Space Entry

For confined spaces that cannot be reclassified as non-permit required spaces, and/or cannot be entered utilizing alternate entry procedures, the Confined Space Entry Permit (HSER-SAF-EXE-FRM-033) and an applicable JSA **shall** be required before any entry work is allowed.

Only properly trained and equipped personnel **shall** be allowed to participate in work involving entry into permit-required confined spaces. HSER **shall** be consulted when entry into a permit-required confined space is planned.

No entry **shall** be made until a rescue plan is developed and implemented for the permit space.

The Entry Supervisor **shall** be responsible for implementing and enforcing CSE requirements.

5.4.1 Preparation of the Confined Space

The Entry Supervisor is responsible for confirming that the confined space has been prepared for entry and the following has been addressed:

- The confined space should be emptied and cleaned as thoroughly as possible without entering. Residues, production material, etc., in the confined space should be washed, steamed, scraped, neutralized as deemed necessary to remove hazardous material or atmospheres.

- Applicable energy isolation (LOTO) procedures **shall** be completed before entry. The power to all moving parts, such as agitators, drives, dispersion blades, etc., **shall** be properly isolated and locked.
- All process piping attached to a confined space **shall** be isolated using double block and bleed with lockout/tagout, or fully disconnected / blinded. Atmospheric hazards such as hydrogen sulfide, flammable vapors, lack of oxygen, **shall** be document on the CSE permit and controlled by purging, flushing or ventilating.
- Temperature within the confined space **shall** be considered. Heat stress hazards and controls **shall** be addressed on the applicable JSA.
- Lighting conditions, the need for climbing, scaffolding, or the presence of water **shall** be considered when preparing a confined space for entry.
- Signs, barricades and/or personnel **shall** be posted outside the confined space to notify personnel of entry in progress and prohibit unauthorized entry.
- Establish a communication system (visual, hand signals, radio, voice, etc.) between the Authorized Entrants and the Attendant.
- Rescue equipment **shall** be staged and ready for use as required.

5.4.2 Atmospheric Testing

Atmospheric testing **shall** be performed by a trained Atmospheric Tester; this may also be the Entry Supervisor, or Attendant if they are trained to do so. An active pump-type monitoring device is to be used.

The atmospheric test results **shall** be documented on the entry permit and **shall** demonstrate that either natural or forced ventilation provides for acceptable entry conditions. Acceptable atmospheric conditions are:

- Oxygen concentration between 19.5% and 23.5%
- Flammable gas less than 10% LEL
- Hydrogen Sulfide less than 10 ppm
- Toxic substances less than OSHA/ANSI Permissible Exposure Limit

Atmospheric monitoring **shall** be continuously performed while persons are working in the confined space; results **shall** be documented at least hourly.

For confined spaces where forced air ventilation is necessary to establish a safe atmosphere, such forced air ventilation **shall** be provided continuously while persons are working in the confined space.

The Atmospheric Tester **shall** initially test from outside of the confined space before anyone enters and as close as possible to the time that the work starts. The Atmospheric Tester **shall** sample as far into the space as practical using an extension wand, additional intake tubing, etc.

5.4.3 Toxic Air Contaminants

If toxic air contaminants are present, ventilation or respiratory protections shall be utilized to ensure contaminant exposure does not exceed OSHA PEL.

5.4.4 Confined Space Entry Permit

A copy of the permit will be available at the job until the permit is canceled as determined by the Entry Supervisor. The duration of the permit **shall** be only until crew change, at the end of the shift, or end of the job, but in no case **shall** exceed 12 hours. Emergency conditions will cancel the permit.

5.4.5 Rescue and Emergency Services

When permit-required confined space entry is conducted, trained personnel **shall** be identified to provide rescue and summon emergency services.

The following **shall** be done where personnel have been designated to provide permit space rescue and emergency services:

- Provide training on the equipment needed to conduct permit space rescues,
- Trained to perform assigned rescue duties and ensure they have successfully completed the training required to establish proficiency as an entrant,
- Trained in basic first aid and cardiopulmonary resuscitation (CPR) and ensure that at least one member of the rescue team or service holds a current certification in first aid and CPR, and
- Ensure that personnel practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the permit spaces or from representative permit spaces

Third party or contractor rescue services **shall** be evaluated and selected based on the specific hazards identified for each entry and their ability to respond in a timely manner based on those hazards.

If the permit space has an actual Immediately Dangerous to Life and Health (IDLH) atmosphere, the rescue service **shall** be located on-site.

Third party or contractor rescue services **shall** be informed of the hazards they may confront, and provided access to all confined spaces from which rescue may be necessary so that they can develop appropriate plans and practice rescue operations.

Non-entry rescue systems or methods **shall** be used by entrants who enter a permit-required confined space unless the retrieval equipment would increase the overall risk of the entry or would not contribute to the rescue of the entrant. Retrieval systems **shall** meet the following requirements:

- Each entrant **shall** use a full body harness or wristlets (whichever is deemed to be most effective alternative), with a retrieval line that is attached, with a retrieval line attached at the center of the entrant's back near shoulder to a mechanical device or fixed point outside the permit space.
- A mechanical device such as a tripod and winch **shall** be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.

5.4.6 Review

Permit-Required Confined Space Permits **shall** be reviewed annually, and revisions will be made to the program as necessary. The Permit-Required Confined Space Permits shall be maintained at the local field office or in the electronic database for three years.

6 TRAINING

Employees exposed to confined space hazards will receive awareness training on how to recognize confined spaces and the hazards they pose.

Personnel with specific roles and responsibilities (Entry Supervisors, Attendants, Entrants, Gas Testers) in entry **shall** require additional CSE training. Initial training **shall** be instructor-led, and annual follow-up training may be either instructor-led or CBT. Training **shall** be certified by containing employees' names, dates of training, and names of instructors.

Training **shall** be provided to each affected employee:

- Before the Employee is first assigned duties outlined in this standard,
- Before there is a change in assigned duties,
- Whenever there is a change in the permit space operations, that presents a hazard which an Employee has not been previously trained, or
- Whenever there is reason to believe that there are deviations from the Permit Space Entry procedures or there are inadequacies in the Employee's knowledge and use, and
- Once an employee has been designated by their supervisor as an Entry Supervisor for reclassifying confined spaces.

7 AUDIT REQUIREMENTS

Audits **shall** be periodically conducted by HSER in order to confirm compliance with this Standard.

8 STANDARD EXCEPTIONS

Requirements outlined in this Standard **shall** be followed, unless a Standard Exception is filed on behalf of, and with the approval of the Operations Manager. The Company's Standard Exception Form is to be utilized to properly document any exceptions.

9 REFERENCES

- Respiratory Protection Standard
- Confined Space Entry Permit (HSER-SAF-EXE-FRM-033)
- 29 CFR 1910.146 Confined Space Entry

10 DOCUMENT CONTROL TABLE

Title: Confined Space Entry Standard			**Document Number:** HSER-SAF-EXE-STD-029	
Next Review Date: 5/21/25				
Originating Department: HSER				
Version History				
Version	**Issue Date**	**Description**	**Author(s)**	**Approved By**
1.0	05/21/25	Create Expand Energy HSER Standard	Katie Rhoads	OGB

11 APPENDICES

Appendix A – Confined Space Entry Permit

APPENDIX A - Confined Space Entry Permit

CONFINED SPACE ENTRY PERMIT

Document Number: HSER-SAF-EXE-FRM-033
Version Number: 1.0

Effective Date: 06/01/25
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BU:	Field Office:	Date:
Equipment Name and Location:		
Purposed of Entry:		

CONFINED SPACE REQUIREMENTS (CHECK BOXES THAT APPLY)

EQUIPMENT PREPARATION	COMMUNICATION	EMERGENCY PLANNING
☐ Lines Double Blocked and Bled	☐ Job Planning/JHA Complete	☐ Emergency Plans Reviewed
☐ Lockout/Tagout Implemented	☐ All Personnel Trained	☐ Assembly Points Established
☐ Lines Disconnected	☐ Pre-Task Tailgate Meeting	☐ Rescue Team on Site
☐ Lines Blinded	☐ Protocols / Work Procedures Reviewed	☐ Non-Entry Rescue
☐ All Liquids Drained	☐ SDS Reviewed/Accessible	☐ Retrieval System
☐ Moving parts secured	☐ Communication Methods _____	☐ Full body harness
☐ Adjacent areas protected from sparks	☐ HSER Rep Notified	☐ Emergency Contact Information:
☐ Hot work permit		
☐ Equipment grounded	☐ Fire Phone # _____	☐ Medical Phone # _____

PERSONAL PROTECTIVE EQUIPMENT	ADDITIONAL HAZARD CONTROLS	HAZARDS OF THE SPACE
☐ Gloves	☐ Forced Air Ventilation	☐ Electrical
☐ Hearing Protection	☐ Fall Protection	☐ Ventilation
☐ Personal 4-Gas Monitor	☐ Fire Extinguisher	☐ Entrapment
☐ Respirator _____	☐ Scaffolding	☐ Engulfment
☐ Goggles	☐ Explosion Proof Equipment	☐ Dust
☐ Face Shield	☐ Water/Liquids Available (Heat Stress)	☐ Poor Visibility
☐ Additional Protective Clothing:		☐ Falls
_____	☐ Other: _____	☐ Other Hazards: _____

ATMOSPHERIC TESTING (Initial monitoring, and re-testing after space is unoccupied for 15 minutes or more)

Manufacturer:	Serial No.:	Calibration Date:
Signature of Atmospheric Tester:	Date & Time:	

	Acceptable Limits	____ : ____ am / pm	____ : ____ am / pm	____ : ____ am / pm	____ : ____ am / pm	____ : ____ am / pm	____ : ____ am / pm
Oxygen	19.5-23.5%						
LEL	< 10%						
H2S	< 10ppm						
Other Toxic: _____	PEL: _____						

CONFINED SPACE ENTRY SUPERVISOR SIGNATURE	Permit start time	Permit Valid Until
CONFINED SPACE ENTRY SUPERVISOR PRINT NAME	This permit will be valid for a maximum of 12 hours, end of current shift, end of job or whichever occurs first. Any unscheduled work stoppage and/or emergency condition will nullify this permit.	
ATTENDANT SIGNATURE(S)	☐ Permit Space Re-Classified to NON-PERMIT CONFINED SPACE ☐ Permit Space Re-Classified to ALTERNATE ENTRY PROCEDURES CONFINED SPACE	
ATTENDANT PRINT NAME(S)	CONFINED SPACE ENTRY SUPERVISOR SIGNATURE & TIME OF COMPLETION	

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CONFINED SPACE ENTRY PERMIT

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ENTRY LOG for PERMIT-REQUIRED CONFINED SPACE ACTIVITIES (Maintained by CONFINED SPACE ATTENDANT.)						
Entrant Names	Time In	Time Out	Time In	Time Out	Time In	Time Out
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Permit-Required Confined Space Permits shall be maintained at the local field office or in the electronic database for three years.

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