

Health and Safety FCX-HS05 |Version 1 | Release 03/2018

POTENTIAL FATAL RISKS

Exposure to Hazardous Substances Entanglement and Crushing Uncontrolled Release of Energy

CRITICAL CONTROLS

Atmospheric Monitoring Ventilation Energy Isolation Entry Permit Execution

A Confined Space is a space that meets all three of the below conditions:

- 1. Is large enough and so configured that a person can enter with their whole body and perform their assigned work
- 2. Has a limited or restricted means of entering and exiting (a configuration that would impede a person ability to self-rescue)
- 3. Is not designed for continuous occupancy (i.e. an individual could not occupy the space during normal operating conditions)

TRAINING REQUIREMENTS

Awareness Training for all employees Initial Training Annual Refresher Training Remedial Training as required

POLICY

OVERVIEW

The Confined Space Policy establishes the requirements and performance standards needed to protect employees and contractors from hazards associated with confined space and to safely enter to perform work in confined spaces.

Permit Required Confined Spaces (PRCS) are confined spaces that have one or more of the following characteristics:

- 1. Contains or has the potential of containing 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

4. Contains any other recognized serious safety or health hazard NOTE: Permits are valid only for as long as it takes to complete the task, but not more than one shift.

ACTIONS TO STAY SAFE

The following requirements must be met when FCX employees or contractors are entering confined spaces on FCX properties:

- Evaluate confined space using the permit to determine if the space is a permit required confined space, retain documentation
- Verify, understand and abide by Confined Space Permit requirements
- Monitor atmospheric condition periodically throughout the entry
- Entrant(s) have the right to observe pre-entry atmospheric test
- Identify and control the hazards within the confined space
- Use proper ventilation
- Understand and abide by assigned roles and responsibilities of confined space entry team
- Establish a communication process with entrant(s)
- Evacuate space immediately at established alarm condition, atmospheric monitor failure, or any uncontrolled/unanticipated change in condition
- Retrieval lines for non-entry rescue (attached to harness, wristlet, or other device) must be worn in Permit Required Confined spaces.

A confined space entry team is the group of individuals assigned to complete a task within a confined space. A typical entry team consists of three roles: entrant, attendant, and entry supervisor. For any Permit Required Confined Space (PRCS) entry, a

minimum of two individuals are necessary. These individuals will be classified as either the:

- Entrant (individual entering the confined space)
- Attendant (the individual staying outside and monitoring the confined space)

A person will also be designated as the entry supervisor (the attendant may serve as the entry supervisor, but the supervisor may never serve as the entrant) and will be responsible for the confined space entry and ensuring that all safety precautions have been met.

Regardless of the role, all entry team members, attendants, entrants and entry supervisors, must understand the following:

Responsibilities and Duties of the Entry Supervisor:

- Define all Risks and Controls
- Establish in writing all acceptable entry conditions
- Conduct a pre-entry meeting with all confined space team members
- Ensure that the atmospheric tests is conducted and recorded
 - o To classify the space
 - Conducted immediately prior to entry
 - o Continued throughout the entry if required
- Ensure all members have been trained in Confined Space entry
- Ensure that rescue services are notified and available, and that the means for summoning them are operable
- Ensure acceptable entry conditions are in place before anyone enters the space and that conditions remain safe throughout the entry
- Maintain the confined space permit:
 - o Authorize entry by signing the entry permit after all conditions for safe entry have been met
 - o Post the completed, signed permit at the entrance to the space
 - Terminate the entry and cancel the permit when entry operations are complete or when uncontrolled hazards arise in or near the permit space
 - \circ $\,$ File the original canceled permit with the appropriate department
- If hazardous conditions arise that are Immediately Dangerous to Life and Health (IDLH), immediately evacuate the space

Responsibilities and Duties of the Attendant:

- Control access to the PRCS:
 - Maintain an accurate count of entrants
 - o Do not allow unauthorized entry
- Communicate with the authorized entrants
- Monitor entrant(s) activities and conditions
- Maintain retrieval lines/system
- Stop work and evacuate the space if:
 - A non-acceptable entry condition occurs
 - Behavior changes in the entrant(s)
 - Outside conditions arise that may endanger the entry team
 - o The air monitor alarms
 - Any new or uncontrolled hazards are introduced
- Manage emergencies
- Attendant may not perform any other duties

Responsibilities and Duties of the Entrant(s):

- Communicate with the Attendant
- Inspect for hazards within the space
- Stop work and evacuate the space if:
 - o Air monitor alarms
 - Air monitor stops functioning normally
 - o Uncontrolled hazard is suspected or observed
 - Any entrant experiences signs or symptoms of exposure to hazards
 - Communication link between the entrant and attendant is broken
 - Conditions outside the space threaten the entrants or attendant
 - Attendant calls for an evacuation
- Wear designated PPE



CONFINED SPACE Entry Permit

DIVISION	DEPARTMENT
DATE TIME	SHIFT
CONFINED SPACE LOCATION	CONFINED SPACE ID #
PURPOSE OF ENTRY	AUTHORIZED DURATION
ENTRY SUPERVISOR NAME	SUPERVISOR APPROVAL SIGNATURE
ENTRY ATTENDANT(S) NAME(S)	
AUTHORIZED ENTRANT(S) NAME(S)	(continue over if necessary)
	I COMPLETED SOP/JHS COMPLETE AND REVIEWED

STEP 1: HAZARD IDENTIFICATION AND RECOGNITION					
EXISTING HAZARDS WITHIN, CONNECTED TO, OR NEAR THE SPACE (hazardous energy, radiation, etc)	CONTROLS	HAZARDS TO BE INTRODUCED TO THE SPACE FROM THE WORK BEING PERFORMED (welding fumes, noise, dust, hot work, other tasks that require specialized PPE)	CONTROLS		

STEP 2: ASSESSING THE SPACE						
SECTION A: CONFINED SPACE HAZARDS YES NO SECTION B: INITIAL AIR SAMPLING (around the opening of the space, and at multiple levels within the space)					n the space)	
Hazardous / Potentially Hazardous Atmosphere			GAS	ACCEPTABLE	READING	
Sloping or Converging Walls or Floors			Oxygen	19.5 – 23.5%		
Engulfment / Entrapment			LEL*	< 10%		
Any Other Recognized Hazards: (noise, heat, uncontrolled energy source, fall hazards inside the space, radiation, thermal exposure etc) List these hazards and controls in section 2			Toxics	< PEL* / TLV* /OEL*		
			Other:			
If the answer to ALL question above is NO, or can be eliminated: The		Time of testing				
space may be classified as NON-PERMIT REQUIRED.			Date of calibration			
Name:			Initials of person taking the sample			
Signature:			Test instrument and #			

STEP 3: PRE ENTRY PREPARATION AND CONTROLS						
EQUIPMENT	REQUIRED / N/A	COMMUNICATION	TESTED			
Ventilation Required: YES / NO		Entrant and Attendant Communication Method:				
Type: Duration:						
Retrieval System (Emergency Escape Apparatus)		Supervisor Communication Method:				
Fire Extinguisher						
Intrinsically Safe Equipment		Emergency Response Communication Method:				
LOTOTO						
Flagging and Barricading						

STEP 4: Pre-Entry Air Sampling (Immediately Prior to Entry)		(Immediately Prior to Entry)	STEP 5: Pre-Entry Meeting and Review			
GAS	ACCEPTABLE	READING	MEETING/REVIEW	INITIALS		
Oxygen	19.5 – 23.5%		Pre Entry Meeting and Review Conducted			
LEL*	< 10%		Acceptable Entry Conditions Have Been Met			
Toxics	< PEL* / TLV* /OEL*					
Other:						
Time of testing		Initials of Tester				

* LEL = Lower Explosive Limit, PEL = Permissible Exposure Limit, TLV = Threshold Limit Value

NOTE: Post completed permit, and any other relevant forms at the entrance to the Confined Space

	ADDITIONAL MONITORING RECORD									
GAS	ACCEPTABLE	TIME	READING	INITIALS	TIME	READING	INITIALS	TIME	READING	INITIALS
Oxygen	19.5 – 23.5%									
LEL*	< 10%									
Toxics	< PEL* / TLV*/OEL*									
Other										

AUTHORIZED ENTRANT(S) NAME(S) (continued from front page)	Time
AUTHORIZED ATTENDANTS (S) NAME(S) (continued from front page)	Time
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