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Global Significant Risk Assessment – Confined Space



Potentially Fatal Risk	Critical Controls to Reduce or Eliminate
Atmospheric Hazards Introduced	Air Monitoring; heat monitoring
	MSDS Review and approval process
	Attendant to monitor
	Ventilation of the space
	Isolation and purging of lines into space
	Hot work permit
	Rotation of employees out of the space
	No use of compressed gases in a space
	Life line/rescue equipment/rescue plan
	Critical Behaviors – following procedures; responding to alarms; monitoring co-workers; proper completion of pre-job review based on permits; understanding the risks and controls prior to doing work
Hazards introduced from other work in area	Attendant to recognize other potential risks
	Pre-job planning and review of other work in area
	Signage and notification for other work groups
	Communication between work groups

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	Critical Behaviors – checking area prior to entry for other work groups; communicating between work groups; thorough completion of pre-job risk reviews
Physical Hazards (Fire, entrapment/engulfment, radiation, heat stress, overhead hazards)	Attendant to recognize/monitor potential risks/hazards
	LOTOTO of energy sources
	Ventilation of the space
	Lifeline, retrieval equipment, escape/rescue plan
	Isolation of incoming lines to mitigate entrapment/engulfment potential
	Communication from work groups
	Air Monitoring the space for gasses
	Access control to avoid overhead hazards
	Hot Work Permit
	Pre-Job risk review to identify risk factors and controls
	Shielding for radiation
	Monitoring space for heat and rotation of employees
	Use of radios for communications with attendant
	Intrinsically Safety Equipment
Critical Behaviors – Thorough completion of area work permits and pre-job inspections or evaluations; evaluating and understanding potential hazards associated with confined space; Notifying attendant if signs or symptoms occur	
Electrical or other energy sources	LOTOTO of energy sources; energy sources directly or indirectly associated with the work or space
	Lifeline, escape/rescue plan
	Emergency Response Personnel that understands the hazards of the work being performed
	Use of a qualified person in pre-job planning and risk review (ie., ECC or electrician)
	Pre-Job risk review to identify risk factors and controls
	Critical Behaviors – Following LOTOTO procedures; addressing concerns to qualified individual; conducting pre-job planning and risk review; stop work if concerns arise
Caught in mechanical or moving parts	Attendant to recognize/monitor potential risks/hazards
	LOTOTO of all energy; Isolation of moving parts associated with or near the confined space

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	Guarding on moving parts
	Lifeline, retrieval equipment, escape/rescue plan
	Pre-Job Risk Assessment to identify internal risk hazards
	Critical Behaviors - Following LOTOTO procedures; conducting pre-job planning and risk review; stop work if concerns arise
Physical Demand/Capabilities	Entry Supervisor needs to review capabilities
	Permits – Identify risks of space and physical demand or capabilities
	Emergency Response Resources
	Critical Behaviors – Make supervisor aware of any limitations; Notify attendant if signs and symptoms occurs

Red Flags – Indicate potential unsafe behavior or lack of controls
Lack of monitoring equipment used in space
Employee complaints or showing signs or symptoms
No attendant present at the space opening
Change in atmosphere (smell, sight, sound)
Lack of gas monitoring results
Lack of life lines or other rescue equipment
No means of communication (ie., radios)
No ventilation equipment in area
No response from entrants in space
Attendant doing other duties in addition to role as attendant
Attendant not present or doing other work
People working around the area of the confined space that are not part of the confined space entry
Smoke, fumes, or other indication around the space
New work starts in area
Lack of barricading or access control to reduce overhead hazards
Missing fall protection or retrieval system

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Incomplete applicable permits
Incomplete Pre-Job to determine other risk factors
Incomplete Confined Space Permit or other applicable permits
Employees completing task with lack of understanding work
Contactors not understanding controls or requirements of confined space
No response from entrants