


Diving Deeper...

... into Confined Space Classification




Confined Spaces

- "Confined Space"?
 - 1) Large enough to bodily enter.
 - 2) Limited or restricted egress.
 - 3) Not designed for continuous occupancy.





Confined Spaces

- Large enough to bodily enter?
 - All extremities fit in space.




What if one person can't fit but others can?





Confined Spaces

- Limited or restricted egress?
 - "One way in, one way out"?
 - *INTENT* = Entrants unable to escape quickly.






Confined Spaces

- Limited or Restricted Egress
 - Hands required to enter/exit. (ladders)

Confined Spaces


- Limited or Restricted Egress
 - Must duck or crawl in or out.

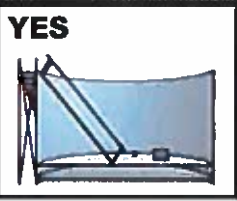
Confined Spaces


- Limited or Restricted Egress
 - Spiral, narrow or movable stairs are used.

NO



YES







Confined Spaces


- Limited or Restricted Egress
 - Objects obstruct exit path that require going over/under/around.

NO




YES






Confined Spaces


- Limited or Restricted Egress
 - Doorway is too small?
 - Less than 2' x 6'6". (1928 FAQ 42)
 - Must duck to enter. (LOI - 10/27/95)






Confined Spaces

- Limited or Restricted Egress
 - The distance to an exit may hinder the ability to safely exit.







Confined Spaces

- Not designed for continuous occupancy.
 - It *could* be occupied that long.






Confined Spaces

- Confined Space?
 - 


Washer & Dryer?



Confined Spaces

- Confined Space?




HVAC Units?



Confined Spaces

- Confined Space?




Semi Trailers? (LOI 10/23/95)



Confined Spaces

- Confined Space?




Drop Ceiling?




Confined Spaces

- Confined Space?




Dock Leveler Pit?




Confined Spaces

- Confined Space?



Basements? (1926 FAQ 45)



Confined Spaces

- Confined Space?




Attics?



Confined Spaces

- Confined Space?




Crawl Spaces?




Confined Spaces

- Confined Space?





Excavations are **EXEMPT!**



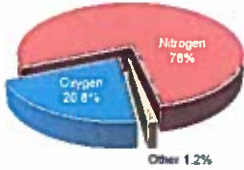


Permit Spaces

- "Permit Required Confined Space"?
 - Hazardous Atmosphere
 - Engulfment Hazard
 - Configuration Hazard
 - Other Serious Hazard


Permit Spaces

- Hazardous Atmosphere (*Oxygen*)
 - Displacement can cause deficiency.

Permit Spaces


- Hazardous Atmosphere (*Oxygen*)
 - Consumption can cause deficiency.

Permit Spaces


- Hazardous Atmosphere (*Oxygen*)
 - How do you evaluate potential?
 - Is the space tightly sealed?
 - How many openings?
 - Where are the openings?
 - How far from the openings?






Permit Spaces

- **Hazardous Atmosphere (Toxins)**
 - Substances above PEL do NOT automatically meet this criteria if unable to cause death or serious harm. (LOI ~ 3/26/99)




How do you feel about this?



Permit Spaces

- **Hazardous Atmosphere (Toxins)**
 - Enclosed utilities do NOT trigger this unless a leak or rupture is foreseeable. (1926 FAQ 29)





Should you still LOTO and purge lines?



Permit Spaces

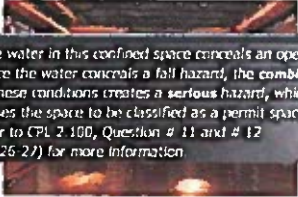
- **Hazardous Atmosphere (Toxins)**
 - Is there contaminated soil around the space?






Permit Spaces

- **Engulfment Hazard**
 - Water/Fluid (Liquids)



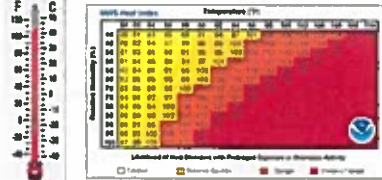
The water in this confined space conceals an open pit. Since the water conceals a fall hazard, the combination of these conditions creates a serious hazard, which causes the space to be classified as a permit space. Refer to CPL 2.100, Question # 11 and # 12 (pp. 26-27) for more information.


What about standing water? (1910 FAQ B-12)



Permit Spaces


- **Other Hazards**
 - Extreme Temperatures






Permit Spaces

- **Other Hazards**
 - Noise that prevents ability to exit space. (1926 FAQ 62)





Permit Spaces

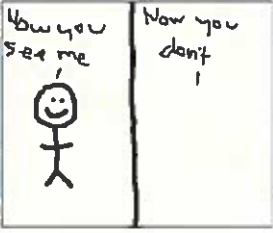
- Other Hazards
 - Falls **NOT** considered "Other Hazard". (LOI 2/23/99)






Reclassification

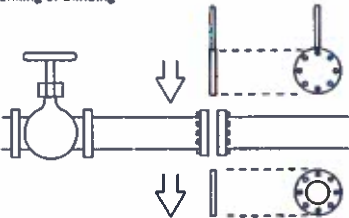
- Must eliminate or isolate all hazards.






Reclassification

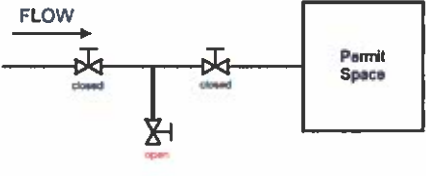
- Isolation Methods
 - Blanking or Blinding






Reclassification


- Isolation Methods
 - Double Blocking & Bleeding (with isolation valves)






Reclassification

- Isolation Methods
 - These are examples of "isolation" valves...




✓ Gate Valve ✓ Ball Valve ✓ Plug Valve




Reclassification

- Isolation Methods
 - Butterfly valves are **NOT** "isolation" valves!






Ask the manufacturer if the valve will completely block **all** product from flowing through the line.



Reclassification



- Isolation Methods
 - Blocking







Reclassification

- Isolation Methods
 - Lockout Tagout








Reclassification


- Isolation Methods
 - Proximity & Barriers

This employee is to hold every unenergized control over a 10-foot distance. They operate in restricted area until they are clear of equipment. They are to be clear of the area. It is important that the employee stand the feet of the lockout. Note the camera angle is to the right of the worker.




This employee is to hold every unenergized control over a 10-foot distance. They operate in restricted area until they are clear of equipment. They are to be clear of the area. It is important that the employee stand the feet of the lockout. Note the camera angle is to the right of the worker.






Reclassification


- Elimination Methods
 - Draining & Purging






Reclassification

- Elimination Methods
 - Flushing, Cleaning & Neutralizing






pH 0	Battery Acid
pH 1	Stomach Acid
pH 2	Lemon Juice, Vinegar
pH 3	Orange Juice, Soda, Some Dental Rinses
pH 4	Tomato Juice, Beer
pH 5	Black Coffee
pH 6	Saltwater, Cow's Milk
pH 7	Pure Water
pH 8	Sea Water, Ph Neutralizing Dental Rinses
pH 9	Baking Soda
pH 10	Antacids
pH 11	Antacids, Dental Treatment Rinses
pH 12	Saapy water



Reclassification

- Unapproved for Reclassifying
 - Mechanical Ventilation



Reclassification

- Unapproved for Reclassifying
 - Pneumatic Plugs



Alternate Procedures

- Qualifications
 - All Physical Hazards Isolated
 - Atmospheric Hazard Only
 - Ventilation Alone can Control
 - Entrants can Exit Safely
 - Monitoring Proves Safe
 - Must Ventilate Continuously



Alternate Procedures

- Benefits
 - No Written Program
 - No Entry Permit
 - No Supervisor or Attendant
 - No Rescue Operations



Conclusion

Questions

