

Diving Deeper...

... into Confined Space Classification



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Confined Spaces

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



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Confined Spaces

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



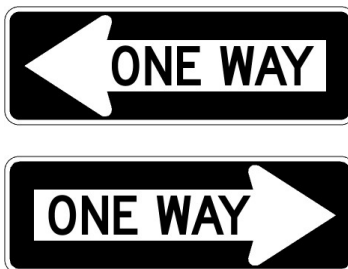
What if one person can't fit but others can?



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Confined Spaces

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



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Confined Spaces

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



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Confined Spaces

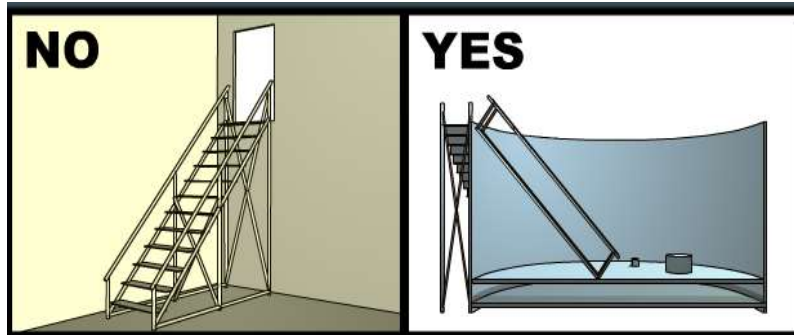
- Limited or Restricted Egress
 - Must duck or crawl in or out.



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Confined Spaces

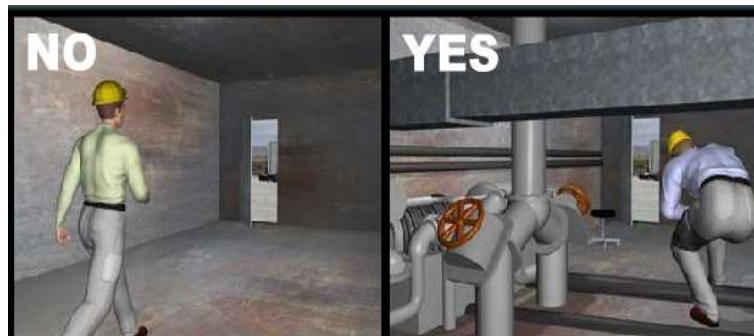
- Limited or Restricted Egress
 - Spiral, narrow or movable stairs are used.



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Confined Spaces

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



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Confined Spaces

- Limited or Restricted Egress
 - Doorway is too small?
 - Less than 2' x 6'6". (1926 FAQ 42)
 - Must duck to enter. (LOI ~ 10/27/95)



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Confined Spaces

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



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Confined Spaces

- Not designed for continuous occupancy.
 - Based off the design of space, not use. ([LOI 6/22/95](#))



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Confined Spaces

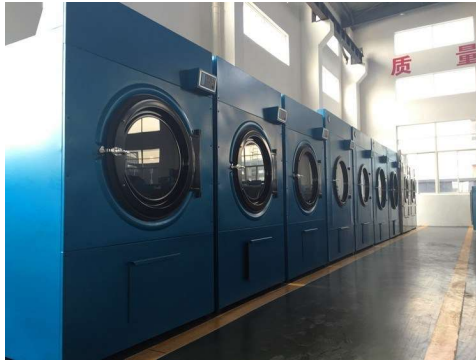
- Not designed for continuous occupancy.
 - It *could* be occupied that long.



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Confined Spaces

- Confined Space?



Washer & Dryer?



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Confined Spaces

- Confined Space?



HVAC Units?



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Confined Spaces

- Confined Space?



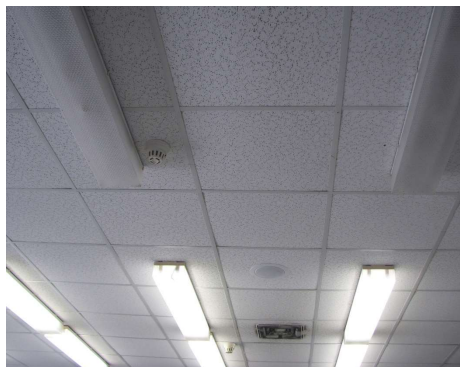
Semi Trailers? (LOI 10/23/95)



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Confined Spaces

- Confined Space?



Drop Ceiling?



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Confined Spaces

- Confined Space?



Tunnels?



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Confined Spaces

- Confined Space?



Dock Leveler Pit?



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Confined Spaces

- Confined Space?



Basements? (1926 FAQ 45)



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Confined Spaces

- Confined Space?



Attics?



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Confined Spaces

- Confined Space?



Crawl Spaces?



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Confined Spaces

- Confined Space?



Excavations are EXEMPT!



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Permit Spaces

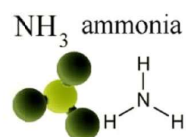
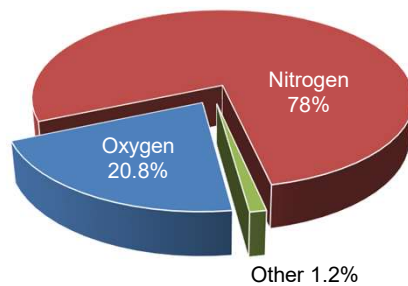
- “Permit Required Confined Space”?
 - Hazardous Atmosphere
 - Engulfment Hazard
 - Configuration Hazard
 - Other Serious Hazard



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Permit Spaces

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



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Permit Spaces

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



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Permit Spaces

- Hazardous Atmosphere (*Oxygen*)
 - Things to Consider...
 - Is the space tightly sealed?
 - How many openings?
 - Where are the openings?
 - How far from the openings?



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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?



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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?



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Permit Spaces

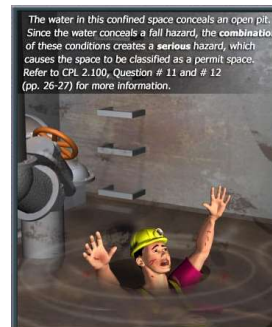
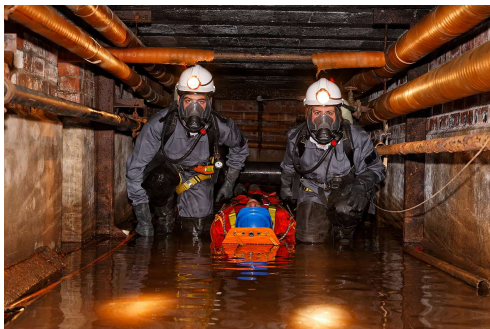
- Hazardous Atmosphere (*Toxins*)
 - Is there contaminated soil around the space?



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Permit Spaces

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



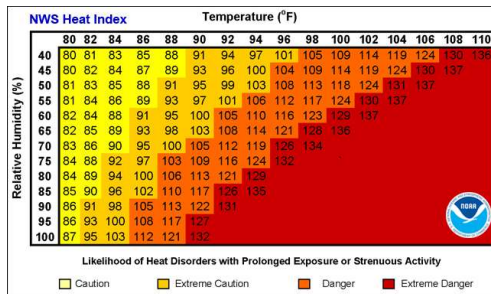
What about standing water? (1910 FAQ B-12)



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Permit Spaces

- Other Hazards
 - Extreme Temperatures



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Permit Spaces

- Other Hazards
 - Noise that prevents ability to exit space. [\(1926 FAQ 62\)](#)



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Permit Spaces

- Other Hazards
 - Falls NOT considered “Other Hazard”. ([LOI 2/23/99](#))



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Conclusion

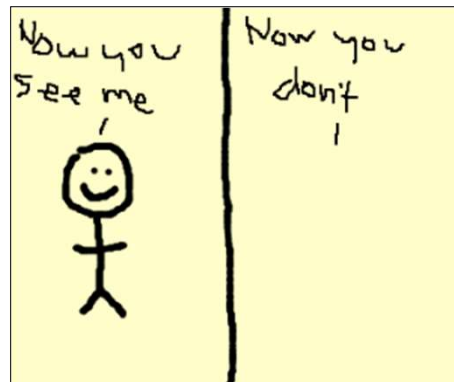
Questions



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Reclassification

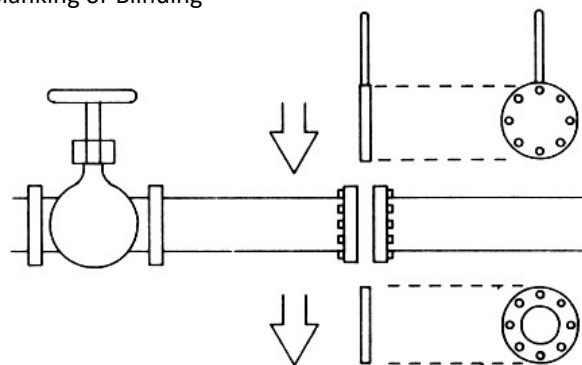
- Must eliminate or isolate all hazards.



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Reclassification

- Isolation Methods
 - Blanking or Blinding

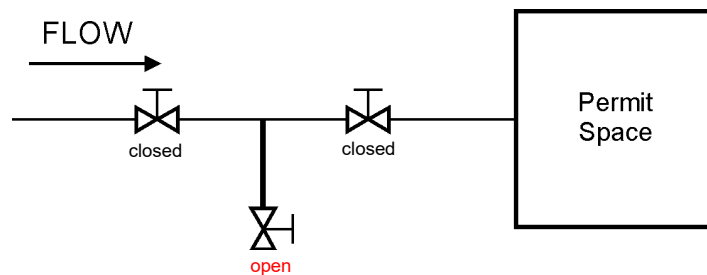


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Reclassification

- Isolation Methods

- Double Blocking & Bleeding (with isolation valves)

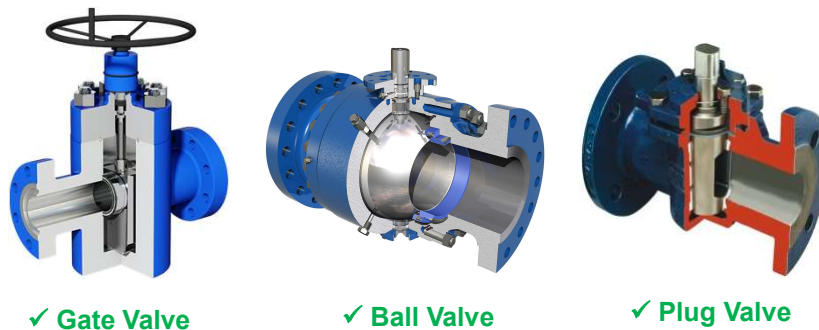


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Reclassification

- Isolation Methods

- These are examples of “isolation” valves...



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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.



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Reclassification

- Isolation Methods
 - Blocking



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Reclassification

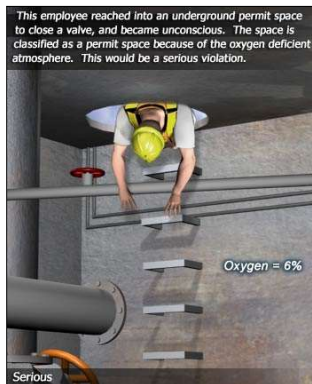
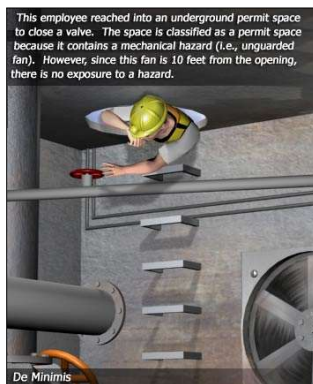
- Isolation Methods
 - Lockout Tagout



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Reclassification

- Isolation Methods
 - Proximity & Barriers



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Reclassification

- Elimination Methods

- Draining & Purging



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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	Saliva, 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	Soapy water



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Reclassification

- Unapproved for Reclassifying
 - Mechanical Ventilation



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Reclassification

- Unapproved for Reclassifying
 - Pneumatic Plugs



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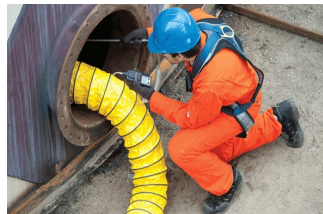
Conclusion

Questions

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Alternate Procedures

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



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Alternate Procedures

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



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Conclusion

Questions

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