Many Cornell University facilities and utilities infrastructure contains confined spaces where entry may be necessary to perform repairs, inspection, or maintenance. Examples of confined spaces include manholes, storage tanks, boilers, vaults, and pipelines. Confined spaces can present a hazard to entrants and safe entry procedures and practices must be strictly followed to ensure safe entry. All entry into confined spaces must be in accordance with the University Confined Space Program.

**Confined Spaces**

A space must meet all of the following criteria to be considered a confined space:

- A space that is large enough to bodily enter
- A space that has limited means of entry or exit
- A space not designed for continuous employee occupancy

**Confined Space Hazards**

**Atmospheric Hazards**

- **Oxygen** concentration below 19.5% or above 23.5%, **Flammable gas** greater than 10% of the Lower Explosive Limit (LEL), Atmospheres exceeding the OSHA Permissible Exposure Limit (PEL), Airborne **combustible dust** that obscures vision at 5ft. or less.

**Configuration Hazards**

- Internal configurations that could entrap or suffocate an entrant by inwardly converging walls or floors that taper to a smaller cross-section. Example: hoppers, bins and tanks

**Engulfment Hazards**

- Where there is a potential for a liquid or solid material to drown, capture or suffocate an entrant. Examples include water, grains and soils.

**Other Hazards**

- Other hazards may include electrical hazards, mechanical hazards, chemical hazards, steam hazards, extreme temperatures, slippery floors, poor lighting, and noise.

**Confined Space Entry Procedures**

- All personnel (*Entry Supervisor, Entrants, and Attendant*) involved with the entry must have received EHS confined space safety training within the last 3 years
- **The space must be assessed for all real and potential hazards.**
- A Confined Space Entry Permit and Pre-Entry Briefing must be completed prior to entry.
  - The Permit is required to be posted at the entry portal or equally effective means.
- Eliminate all hazards prior to entry when feasible. Utilize Lock/Tag/Verify procedures when required.
- Complete and record pre-entry air quality measurements. **Continuously** monitor the space during entry.
- Obtain and set up all safety equipment including air monitors, barricades, and ventilation equipment when required.
- Entrants working in a Permit Required Confined Space must wear a **body harness for underground entries**.
- Contact EHS at 607-255-8200 if questions exist or hazards within the space cannot be eliminated prior to entry.
- All completed entry permits are to be retained by Entry Supervisor for one year. Upon request completed forms must be made available to EHS for annual program review.