CONFINED AND RESTRICTED SPACE ENTRY

Appendix A: Confined Space Entry Permit

Effective Date:	Work Request # or Project ID #:
Start Date:	End Time (Permit Expiry Time:

1. Work Area Detail

Building and Location (include ID number as noted on the inventory):

Work Area Description (describe work to be completed):

2. Hazard Identification

Atmospheric Conditions (Confined Space is HIGH RISK if any of the following atmospheric conditions exist)

- ☐ Oxygen Deficiency (below 19.5%)
- ☐ Oxygen Enriched (above 23%)
- ☐ Concentration exceeding 8-hr exposure limit (OEL)
- ☐ Concentration of hazard above specified LEL
- ☐ Dust / Mist / Fumes
- ☐ Other (specify):

NOTE[1]: For all Hazardous atmospheres, a Record of Continuous Monitoring (pg. 6) must be completed.
NOTE[2]: If the atmosphere must be purged and/or inerted prior to entry, a qualified contractor MUST be used.

Physical Conditions and Other Hazards

- ☐ Moving / Rotating Equipment
- ☐ Slips / Trips / Falls
- ☐ Falls from Height / to Lower Level / Floor Openings
- ☐ Hot Work
- ☐ Extreme Heat / Cold
- ☐ Chemicals (MSDS reviewed)
- ☐ Traffic
- ☐ Noise
- ☐ Worker Fitness / Medical Condition
- ☐ Static Electricity
- ☐ Radiation
- ☐ Overhead Loads / Falling Objects
- ☐ Stored Energy
- ☐ Entrapment / Engulfment in Product or Liquid
- ☐ Piping or Physical Configuration of Space
- ☐ Inadequate Lighting
- ☐ Claustrophobia (no entry if in doubt)
- ☐ Other (specify):

Additional Description of Hazards

Provide further details of the identified hazard including specific dimensions, location, levels, etc. (attach additional information if required)

3. Hazard Control

Control Systems:

- ☐ Ventilation – Intrinsically Safe
  Supply Fan Rating _____ cfm (min. 50 cfm/ person)
- ☐ Isolation – Control of Hazardous Energy (i.e. LOTO)
- ☐ Purging (by qualified contractor)
- ☐ Inerting (by qualified outside contractor)
- ☐ Travel Restraint / Fall Arrest
- ☐ Lighting
- ☐ Guard Rails (site specific training required)
- ☐ Barricades / Pylons / Warning Tape
- ☐ Tripod / Man-Winch / SRL
- ☐ Davit Arm / Man-Winch / SRL
- ☐ Gas Monitoring
- ☐ Continuous / Periodic at intervals
- ☐ Posted signage
- ☐ Communication system
- ☐ Other (specify): _____

Personal Protective Equipment:

- ☐ SCBA / SABA
- ☐ Respirator – Cartridge Type: _____
- ☐ Full Body Harness Class: _____
- ☐ Lifeline
- ☐ Flame Resistant Clothing
- ☐ Hard Hat with chin strap / Rescue Helmet
- ☐ Gloves – Type: _____
- ☐ Boots – Type: _____
- ☐ Radios / Cell Phone (ensure reception at site)
- ☐ Flashlights - intrinsically safe? Yes / No
- ☐ Face Shield
- ☐ Safety Glasses
- ☐ Other (specify): _____

4. Communication

Audible		**Visual**	**Tactical**	☐ Other (specify):
☐ Verbal*	☐ Tapping / Knocking	☐ Hand Signals	☐ Tug on Lifeline	
☐ Radio	☐ Whistle	☐ Flashlight	☐ Tap on Body	
☐ Cell Phone		☐ Flags		

**Note: Avoid use of words such as slow, no, go, whoa.*

Additional Description of Communication Procedure / Commands
Provide further details of the planned communication procedures (i.e. SUDOT System with check intervals) (attach additional information if required)

5. Rescue Plan

Identify the Procedure for prompt and safe removal of injured workers:

- ☐ Site First Aid (list designated first aiders)
- ☐ Self-Rescue (entrant is able to remove self from the space)
- ☐ Rescue can be carried out without entry into the space (verify training of tending worker)
- ☐ Other (specify):
- ☐ Class 1 – Internal (>24" Opening with no obstructions) – rescue can be completed from outside the space
- ☐ Class 2 – Internal/External (<24" Opening and/or with obstruction, based on hazard assessment) – rescue plan to be approved by manager, and/or competent EH&S manager or consultant.
- ☐ Class 3 – External (<24" Opening and/or with obstruction) – external rescue team will be onsite

- ☐ All equipment has been inspected

5. Rescue Plan (continued)

Rescue Procedure and Equipment

Please provide further details on rescue procedures and equipment. Note: Campus Security and or Calgary Fire Department is not an effective rescue plan) and First Aid attendant. (Example: Non-entry rescue standby to winch / pull out Entrant with lifeline)

6. Worker Details

The worker in charge of Entrants is referred to as *Tending Worker*:

I, _____ certify that my sole duty at this worksite in the time period specified on this permit is as Tending Worker. I will be documenting the continuous monitoring readings (if applicable) and ensuring the Entry / Exit Log is completed in addition to any duties required of the Tending Worker.

Tending Worker (print name and sign)

_____ _____

Entrant(s)

By signing this document, Entrants acknowledge the following:

a) That all Entrant(s) have reviewed this permit in its entirety.
b) The conditions and controls are as stated on the permit.
c) Are aware of all procedures for the job, communication and emergencies.

Entrant(s) (print name and sign)

_____ _____

_____ _____

_____ _____

To be approved by a competent, trained and designated University of Calgary Manager or Supervisor or Environmental, Health, and Safety (EH&S):

All actions and/or conditions for safe entry have been identified. I have verified the conditions as set forth on this permit to be correct and authorize the work to commence.

Department	Print Name	Signature	Phone

A copy of completed permit and related documents must be submitted to approver upon completion of the confined space job. All electronic copies will be saved at designated department shared drive.

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Appendix A: Confined Space Entry Permit Checklist

- ☐ Permit and accompanying documents completed and posted at work site access point.
- ☐ Must have a Tending Worker designated, must be in constant communication with Entrant(s) via radio, mike phone. Check in time may not exceed intervals of 5 minutes. Any failure to respond to the communication system will place the rescue plan into immediate effect.
- ☐ Communication System – understood by Tending Worker and Entrant(s)
- ☐ Rescue Plan understood by all involved.
- ☐ * CSA approved Full Body Harness adjusted and inspected in accordance with manufacturer's specifications.
- ☐ * Lifeline affixed to workers Dorsal D-Ring with snap hook, self-locking carabiner, or rescue knot (unless doing so will create a hazard), inspected in accordance with manufacturer's specifications.
- ☐ Manufacturer's assembly, disassembly, inspection instructions reviewed for all equipment present at site.
- ☐ Entrance adequately controlled to eliminate interference from traffic (pedestrian and/or motorized vehicles).
- ☐ Tending Worker posted at work site entrance with no additional duties.
- ☐ * Tripod / Davit Arm properly erected and locked.
- ☐ * Winch (man rated) and/or Haul System tested under load prior to hold being uncovered.
- ☐ 4 head gas monitor appropriate for identified potential hazards (i.e. H2S, Oxygen, LEL, CO). Calibration date reviewed, monitor zeroed in known source of clean respirable air, whole volume of space tested.
- ☐ Monitor operator trained in proper working procedure for monitor.
- ☐ Entrant(s) to test atmosphere prior to entering space.
- ☐ Mechanical ventilation is continuous and started minimum of 15 minutes prior to entry until atmospheric testing demonstrates clean respirable air.
- ☐ Rescue equipment on site and inspected by a competent person.
- ☐ Rescue Team has reviewed the permit and/or work site.
- ☐ SABA / SCBA inspected by a competent person. 2000 psi of air minimum.
- ☐ Lanyard or Lifeline selected / adjusted to shortest possible length while still permitting unimpeded movement. **DO NOT USE** if it will create an additional hazard (i.e. get wrapped around piping or machinery).
- ☐ Hole covers are secured, markers and capable of withstanding anticipated weight loads.
- ☐ Rescue Team and equipment on standby at worksite with no additional duties.
- ☐ Approver has reviewed the permit and work site conditions.
- ☐ Continuous monitoring of space conducted.

*For "TOP" Entry

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Appendix A: Confined Space Entry Permit Record of Monitoring

Type of Monitor:

Monitor must be calibrated and bump tested prior to use:

Atmospheric Testing						
Permissible Atmospheric Conditions:		**19.5% - 23% Oxygen**	**<25 ppm Carbon Monoxide**	**<2.0% LEL Methane**	**<10 ppm Hydrogen Sulphide**	
Location (e.g., ceiling, floor, corner, etc.)	**Time**	**Oxygen (%)**	**Carbon Monoxide (ppm)**	**LEL (%)**	**Hydrogen Sulphide (ppm)**	**Initials**

Entry / Exit Record						
Name	**Time In**	**Time Out**	**Time In**	**Time Out**	**Time In**	**Time Out**