

**Electrical Vaults -- Permit Required Confined Space Entry Permit**

**1. Electrical Vaults Entry Procedure and Permit**

\*\*All shaded areas must be completed by the Entry Supervisor or Entrant\*\*

**2. Work to be Performed and Location:**

**3. Date Issued:**     /     /

**Time Issued:**     :      a.m.  p.m.

**4. Permit Space Hazards (X = Potential Hazard or Testing Requirement)**

<b>X</b>	Oxygen - hazardous when less than or equal to 19.5% <b>OR</b> greater than or equal to 23.5 %.	<b>X</b>	Mechanical Hazards (Pneumatic, Hydraulic, Electrical, Chemical, Steam, Falling Objects, Etc.)
<b>X</b>	Flammable Gases or Vapors - hazardous when greater than 10% of LFL / LEL.		Engulfment Potential
<b>X</b>	Hydrogen Sulfide - hazardous when greater than 10 PPM		Physical Hazards - (bees, insects, spiders, heat during the summer)
	Carbon Monoxide - hazardous when greater than 50 PPM (always look for when welding or near a fuel combustion source (cars, utility carts, etc.)		Confined Space Configuration, Layout or Arrangement
	Other Toxics:		

**5. Additional Permits or Forms (Please attach if required)**

**Hot Work Permit:**  YES  NO  N/A     **LOTO / Hazardous Energy Control Procedure:**  YES  NO  N/A     **Other:**

**6. Equipment Required for Entry & Work (Check box when complete)**

<input type="checkbox"/> <b>PPE</b>	Eye protection, body harness, fire retardant clothing, other PPE per NFPA 70 arc flash standard.
<input type="checkbox"/> <b>Atmospheric Testing</b>	4-Gas Meter required for testing. Test atmosphere in vault by using stratified method of checking atmosphere at different levels within the space.
<input type="checkbox"/> <b>Respiratory Protection</b>	Not required for this space under normal atmospheric conditions. If levels are outside limits, ventilate space before entry.
<input type="checkbox"/> <b>Ventilation Equipment</b>	Ventilation is required if the 4-gas meter indicates that a hazardous atmosphere is present or will occur from work operations.
<input type="checkbox"/> <b>Rescue Equipment</b>	Not required under normal conditions. Attendant should be ready to call for help in the event that the entrant is injured or becomes incapacitated.

**7. Communication method used by attendants and entrants (Check all that apply)**

<input type="checkbox"/>	<b>Radio</b>
<input type="checkbox"/>	<b>Voice</b>
<input type="checkbox"/>	<b>Other</b>

**8. Confined Space Rescue**

The assigned confined space attendant is responsible for evacuating entrants in the event of an emergency by means of vocal communication or retrieval equipment used for the entry. At no time will the attendant enter the confined space. In the event the attendant is unable to evacuate the entrant(s), the Charlotte Fire Department will be notified by UNC Charlotte Police Dispatch at 704-687-2200 to provide rescue assistance. Upon the arrival of rescue personnel, the attendant should brief the rescuers of any notable information.

**9. Authorized Entrants (List by name)**

**10. Authorized Attendants (List by name)**

**11. Preparation for Entry (Check boxes when complete)**

<input type="checkbox"/>	Notify affected department of service interruption and complete the Confined Space Entry Permit and any other required permits and forms. Barricade the area to prevent public access. Check the vault hatch for elevated temperature and pressure by touching and lifting the lid slightly.
<input type="checkbox"/>	Inspect all required equipment, tools and PPE prior to entry. Barricade the area to prevent unauthorized entry or access. Setup necessary equipment for entry operations.
<input type="checkbox"/>	All electrical hazards must be fully controlled or eliminated before entry into the vault. High voltage equipment energy control may be needed which requires specialized operations, PPE and training. Ensure that all hazardous energy is isolated per the specific Hazardous Energy Control Procedure.
<input type="checkbox"/>	Sign in Authorized Entrants in Step 9 and Sign in Attendants in Step 10.
<input type="checkbox"/>	Test the atmosphere of the vault in a stratified method (from bottom of manhole to the top). Record sample readings on Step 12. Some gases are heavier than air and will settle in the bottom of the vault. Testing continuously during entry. Periodically record sample readings in Step 12. Ventilation is required if 4-gas meter indicates that a hazardous atmosphere is present or will occur from work operations.
<input type="checkbox"/>	Upon eliminating or controlling all hazards and the Entry Supervisor signing Step 13, proceed to make entry.

<b>12. Atmosphere Testing Record Acceptable Conditions</b>	Pre-Entry Results	Entry #1 Results	Entry #2 Results	Entry #3 Results	Entry #4 Results	Entry #5 Results
Time of Sampling						
CH <sub>4</sub> – Methane - Less than 10% of LEL / LFL						
O <sub>2</sub> - Oxygen Range - Minimum allowable = 19.6% to Maximum allowable = 23.4%						
H <sub>2</sub> S - Hydrogen Sulfide - < than 10 PPM						
CO - Carbon Monoxide - < than 35 PPM						
Other Toxic:						
<b>Tester Initials</b>						

**13. Authorization by Entry Supervisors**

I certify that all required precautions have been taken and necessary equipment is provided for safe entry and work in this electrical vault confined space.

<b>Printed Name</b>	<b>Signature</b>	<b>Date</b>	<b>Time</b>	<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
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<b>14. Permit Cancellation (Complete at the end of job not to exceed 24 hours)</b>	<b>Date</b>	<b>Time</b>	<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
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This permit must be posted at the job site -- One Copy to Department's File and One Copy to EHS Office (Fax 7-5302 or EHS Building)