

1 Jun 02

1. **Description of Workplace:** Electrical manholes are located throughout the base. These manholes range in size from 4' x 4' up to 10' x 10'. The manholes are underground and have only one opening in the top.

2. **Tasks/Operations to be performed:** Exterior Electric personnel will have to enter these confined spaces for maintenance and repair of electrical distribution lines.

3. **Chemicals used:** None

4. **Technical Data Required** This Confined Space Master Entry Plan, AFOSHSTD 91-25, AFOSHSTD 91-10, AFI 32-1064 and The National Electric Code (NEC).

5. **Prevention of Unauthorized Entry:** Electrical manholes have heavy large steel covers that require two people and special tools to remove. The work area will be roped off to limit entry and "Danger-Permit –Required Confine Space, Do Not Enter" signs will be posted.

6. **Potential Hazards:**

6.1. **Potential Hazard Description:** Electrical shock, falling objects, and toxic gasses. Decomposed organic matter can create an oxygen deficient atmosphere in addition to combustible and toxic gases.

6.2. **Control of Hazards**

6.2.1. **Entry Permit:** Entry Permit Required

6.2.1.1 **Permit:** Confined Space Entry Permit AF Form 1024.

6.2.1.2. **Permit Requirements:** A confined space entry permit is required upon determination by the supervisor that there is a need to enter the electrical confined space to perform maintenance.

6.2.2. **Confined Space Reclassification:** None

7. Entry Procedures

7.1. **Confined Space Isolation Methods/Lockout Tag-out:** Lockout tag-out procedures will be utilized to lock out all utilities being worked on.

7.2. **Acceptable Entry Conditions:** The manhole confined space will be tested with the Neotronics Exotox 60. Oxygen levels will be tested first and must be between 19.5% and 23.5%. It will then be tested for the following items and readings must be within the following limits: Flammability <10% LEL, Carbon Monoxide <35 ppm, Hydrogen Sulfide <10 ppm, Chlorine <0.5 ppm, Sulfur Dioxide <2 ppm. Fire Department Emergency Rescue Service must be available. The Base Emergency Rescue Service must be available.

8. Authorization

8.1. **Confined Space Entry Team:** Will consist of trained and authorized personnel from the 75 CES/CEOE known as "Exterior Electric." (See attachment two - Authorized Entry Supervisor Listing)

8.2. **Confined Space Entry Team Responsibility:** A typical entry team consists of four or five people: the entry supervisor, the attendant, a runner, and up to two entrants.

8.2.1. **Entry Supervisor:** Responsible for the isolation of the area, the assigning of tasks, and the briefing of the personnel doing the tasks. The entry supervisor insures all lockout tagout and acceptable entry conditions listed in paragraph 7.1. and 7.2. are complied with. Authorizes the confined space entry permit, makes sure the entry permit is complete, dated, and signed prior to the entry and cancels the permit if conditions are no longer acceptable..Entry Supervisor will act in accordance with all other duties outlined in AFOSH Std 91-25, par 2.13.

8.2.2. **Attendant:** Is responsible for maintaining an accurate count of entrants (who and number) in the permit space and keeping track of the entrant(s) and handing any needed equipment in or out of the manhole. He/she is to remain outside, on the upwind side of the manhole, in verbal contact with the entrant. Has authority to order entrants to exit the confined space at the first indication of a non-permitted condition, an unexpected hazard, indication of a toxic reaction (e.g., unusual conduct by the entrants), or if a situation occurs outside the space that could pose a hazard to the entrant(s). Keep unauthorized persons from entering the permit space. Know the procedure and have the means to summon immediate emergency assistance if needed. Remain at the attendant's post and not leave for any reason (except self-preservation) unless replaced by an equally qualified individual. Order the entrants to exit the space if the attendant must leave and there is no replacement. Attendant must not attempt rescue involving entry. Make rescue efforts by means of the lifeline until assistance arrives.

8.2.3. **Entrants:** Reviews the permit before entry, complying with entry procedures, wears PPE, full body harness with retrieval line, notifies entry supervisor of illness or medication being taken, alerts the attendant to any changes or conditions in the confined space and responds immediately to the attendants evacuation orders.

8.2.4. **Spotter/Runner:** Non-Entry person responsible for rescue procedures and contacting emergency personnel. Spotter will be the one to call 911 and notify Fire Department Emergency Rescue personnel of the location, victims condition, rescue procedures which are currently taking place, description of location and possible hazards that may exist. This information must be as detailed as possible.

9. **Training:** All personnel authorized to enter the confined space must be trained on confined space entry, site specific confined space training, cardiopulmonary resuscitation, respirator wear, use of PPE, retrieval/rescue equipment and atmospheric monitoring equipment. All training shall be documented on an **AF Form 55, Employee Safety and Health Record** Training records will be available for review by the CSPT during annual program evaluations or spot checks.

10. **Entry Equipment:** Neotronics Exotox 60 Gas detection meter, body harness, extraction tripod, hard hat, rubber gloves, leather gloves, rubber protective equipment, high voltage test equipment, eye protection, hearing protection. NOTE: Lifeline from extraction tripod will be attached to the entrant prior to entry.

11. **Testing:** The manhole confined space will be tested with the Neotronics Exotox 60. Oxygen levels will be tested first and must be between 19.5% and 23.5%. It will then be tested for the following items and readings must be within the following limits: Flammability <10% LEL, Carbon Monoxide <35 ppm, Hydrogen Sulfide <10 ppm, Chlorine <0.5 ppm, Sulfur Dioxide <2 ppm.

12. **Communication and Observation** The entrant and attendant will communicate verbally and maintain visual contact. All electric crews have communication by cellular phone to call emergency services. *Remember cell phone 911 calls go off base. For base rescue services call 777-1911 when using a cell phone. Base phones: Call 911 to notify base rescue service.*

13. **Rescue:** The Attendant will notify the runner to notify the Base Fire Department Emergency Rescue Service. Rescue will begin with attendant, runner and any other personnel present assisting in the extraction of the entrant out of the manhole confined space using the tripod. The attendant will perform first aid and CPR until the emergency services arrives

14. **Contractor Interface:** If a contractor is to enter a confined space listed under this MEP they must use their own equipment and permit. A copy of this master plan is given to contract management, who are responsible to inform the contractor of OSHA, AFOSH Standards, and local OI's. If the organization arranges to have a contractor perform work that involves a permit-required space entry, IAW 91-25 Ch 7 the contracting organization shall: Notify the contractor that work will be performed in a permit-required confined space and ensure the information is included in the statement of work (SOW) or equivalent contracting tool. Review emergency rescue responsibilities to determine whether the contractor supplies rescue team or if the installation fire department is expected to supply a rescue function. Ensure the fire chief coordinates on the contract and either approves or disapproves the use of the rescue team if supplied by the installation fire department. Brief the contractor on the contents of the space and known hazards that make the space permit-required. Brief the contractor on precautions and procedures that have been implemented by the organization to protect Air Force workers.

15. **Permit Routing and Control:** Permit will be kept on file in the 75 CES/CEOE shop for a period of one year after completion of work.

16. **Amendment to the MEP:** The MEP must be reviewed at least once a year. Changes to the MEP other than spelling and grammar must be coordinated with the entry supervisor, organizational safety office, Bio-environmental Engineering /SGPB, Fire Department /CEF and Base Safety Office /SEG. Amendments to the MEP will be brought to attention of the confined space entry team.

17. **Coordination:**

<hr/> <i>75 CES/CEOE (Exterior Electric Forman)</i> <hr/>	<hr/> <i>Date</i> <hr/>
<hr/> <i>75 CEG/CEMS Ground Safety Manager</i> <hr/>	<hr/> <i>Date</i> <hr/>
<hr/> <i>OO-ALC/SEG Ground Safety Manager</i> <hr/>	<hr/> <i>Date</i> <hr/>
<hr/> <i>75 AMDS/SGPB Bioenvironmental</i> <hr/>	<hr/> <i>Date</i> <hr/>
<hr/> <i>775 CES /CEF Fire Department</i> <hr/>	<hr/> <i>Date</i> <hr/>

ATTACHMENTS

1. Confined Space Chemical Listing (See paragraph 3)
2. Confined Space Entry Authorization List

**CONFINED SPACE MASTER ENTRY PLAN
CE-002
ATTACHMENT 1**

CONFINED SPACE CHEMICAL LISTING

The following is a list of chemicals authorized for use during the confined space entry.

<u>Chemical</u>	<u>Quantities Authorized for Use</u>	<u>Expected Exposure Level</u>
None	N/A	N/A

**CONFINED SPACE MASTER ENTRY PLAN
CE-002
ATTACHMENT 2**

CONFINED SPACE ENTRY AUTHORIZATION

The following personnel assigned to 75 CES/CEOE (CE Electrical Shop) are authorized to approve and sign confined space entry permits for work to be performed in Electrical Manholes.

<i>NAME</i>	<i>OFFICE SYMBOL</i>	<i>Primary/Alternate</i>
Mr. Lynn Perkins	75 CES/CEOE	Primary
TSgt Donald Meyerpeter	75 CES/CEOE	Primary
Mr. Jeff Meyer	75 CES/CEOE	Alternate
Mr. Todd Cook	75 CES/CEOE	Alternate