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LAST REVISION: August 8 th , 2016	REVIEWED BY: L. Kirk Berglund, Safety Director	FORM REF No: SP-CSE
SUBJ: Confined Space Entry		

CONFINED SPACE PROGRAM

PURPOSE

Meiners Electric is committed to providing a safe and healthful work environment for all of our employees. In pursuit of this endeavor, the following written program is in place to first identify any Permit-Required Confined Spaces (PRCS) and to eliminate or control hazards associated with PRCS operations. This program is in accordance with the Occupational Safety and Health Administration's (OSHA) Permit-Required Confined Spaces Standard, Title 29, Code of Federal Regulations 1910.146 and 1926.1200

RESPONSIBILITIES

Individuals assigned to work where confined space entry is required, will have the responsibilities related to the work they perform. These responsibilities are identified below.

1. Safety Director

- Work with the client and crew leader to determine the type of confined space along with any known hazards.
- Provide specific training to all Attendants regarding the inspection, calibration and use of gas monitoring equipment.
- Review hazards and special considerations with crews.
- Verify that all safety equipment and PPE are available to the crews prior to entry.

2. Entrants

- Know the hazards associated with the permit space and their effects
- Properly use the equipment required for entry
- Maintain a continuous means of communication with the attendant
- Alert the attendant in the event of an emergency
- Evacuate the space if an emergency occurs

3. Attendants

- Know the hazards associated with the permit spaces and their effects
- Maintain an accurate account of authorized entrants
- Will remain at their assigned station until relieved by another trained attendant or when all personnel have exited the confined space and the entry is complete
- Monitor conditions in and around the permit space
- Summon rescue and applicable medical services in the event of an emergency
- Perform non-entry rescue procedures



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- Perform appropriate measures to prevent unauthorized personnel from entering the permit space

4. Entry Supervisors

- Know the hazards associated with the permit space and their effects
- Verify that the safeguards required by the permit have been implemented
- Verify that rescue services are available and that means for summoning them are operable
- Cancel the written permit and terminate the permit space entry when required
- Remove personnel who are not authorized to enter the permit space during entry operations
- Periodically, determine that entry operation is being performed in a manner consistent with requirements of permit space entry procedures, and that acceptable entry conditions are maintained

PERMIT SPACE IDENTIFICATION

Contract specifications will be reviewed to determine if the potential for confined space situations exists. The host employer will be required to provide information regarding the confined spaces. A meeting will be held to exchange information and to determine the confined space procedures to be used (host or contractor plans).

If a confined space exists, the space will be classified as a Permit-Required Confined Space or a reclassified as a Non-Permit Confined Space if it can be shown that no hazards exist. Permit-Required Confined Spaces are confined spaces that may be hazardous to employee's health. It could be from hazardous atmospheres, electrical hazards, mechanical hazards, or even possible rodent or snake infestation just to name a few. If hazards can be eliminated before entry into a space, the space can be reclassified as a Non-Permit Confined Space.

The Entry Supervisor will certify that all hazards are eliminated before entry. All entrants will receive training before entering any classification of confined space.

PERMIT-REQUIRED CONFINED SPACES (PRCS)

Notices will be posted at the entrance of all Permit-Required Confined Space prohibiting entry. An entry supervisor will be assigned to the space. Employees will obtain a permit from the host or Safety Coordinator before entering these spaces. All equipment required by the permit and procedures described in this program will be followed.



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TRAINING

All employees will be trained to observe confined space signs, warnings and the purpose of permit entry procedures. All individuals involved in confined space permit entry operations will be trained on the following topics (as needed):

- Types of confined space hazards
- Components of the written PRCS program and entry permit system
- Components of the hot work permit
- Need for guarding of entrance opening
- Atmospheric testing equipment and protocol (use, calibration and maintenance)
- Oxygen, combustibles and toxins
- Pre-entry, frequent, or continuous testing
- Methods for the control or elimination of any atmospheric hazards
- Continuous forced air ventilation
- Procedures to follow if a hazard is detected
- The evaluation process to be used for re-entry if hazards are detected
- The use of entry equipment (e.g. ladders, communications devices, etc.)
- The use of personal protective equipment required: full body harness with attached lanyard, respiratory protection, chemical protective clothing, eye and face protection
- Procedures to coordinate with rescue team, on- or off-site rescue, rescue plan, and practice rescues
- Procedures for annual review of permits
- Basic first-aid and CPR certification
- Any other information needed to ensure safety during permit space entry operation

RESCUE AND EMERGENCY SERVICES

The precautions and procedures outlined in our written PRCS program are designed to ensure that our employees are safe while working in permit spaces. Under no circumstances do we expect our employees to enter a permit space where hazards have not been eliminated or effectively controlled. Additionally, we recognize that unexpected situations might arise that prevents entrants from self-rescue. In response, one of the following rescue and emergency plans will be applied, depending upon the jobsite location.

Before confined space entry, the appropriate rescue procedure needs to be developed and available to the affected employees.

Non-entry rescue occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space. This is accomplished using equipment such as retrieval line, chest or full body harness, wristlets or anklets, if appropriate, and a lifting device or anchor.

If the confined space is in a plant, factory or with any company that has its own rescue service, the confined space entry needs to be reviewed with the appropriate department. It will be determined if the



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host company will provide rescue service if needed and the appropriate procedure that needs to be followed.

If the confined space is located where company rescue services are not available, the local fire/rescue department will be used. The service to be used needs to be contacted before confined space entry to ascertain if the service is available on the date of entry, the exact location of the confined space, and if they are able to perform rescue for the type of hazard that may be encountered.

Whichever type of rescue service will be used, the type of service, names and phone numbers need to be posted with the entry permit by the confined space for quick access. A telephone or radio needs to be easily accessible to enable notifying the rescue service quickly.

PERMIT-REQUIRED CONFINED SPACE PROGRAM REVIEW

Upon completion of each job involving a permit-required confined space, a debriefing conference will be held to inform the host employer of any hazards confronted or created.

Within one year of any entry operation, Meiners Electric will conduct a review of the program using the canceled entry permits to identify any deficiencies in our program. A review will be conducted sooner if there is reason to believe that the program does not adequately protect our employees. Any corrective measures will be documented by a revision of the program. Employees will be trained on any changes. Additionally, employees who note any inadequacies with the program can contact the Safety Coordinator. If no permit space entry operations are conducted during the year, no review is needed.



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ENTRY PERMIT

Date & Time Issued:	Date & Time Expires:
Site Location & Description:	
Purpose of Entry:	
Job Foreman Name:	Confined Space Entry Supervisor:

Attendants

1	2	3
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Entry Crew

1	3	5
2	4	6

REQUIREMENT(s)	DATE / TIME	INITIALS
Lockout/Tagout		
Line(s) Broken/Capped/Blanked		
Purge, Flush and Vent		
Ventilation		
Secure Area (Post and Flag)		
Breathing Apparatus		
Resuscitator-Inhalator		
Full-Body Harness w/"D" ring		
Emergency Escape Retrieval Equipment		
Lifelines		
Fire Extinguisher(s)		
Lighting (intrinsically safe)		
Protective Clothing		
Respirator(s) (Air Purifying)		
Communication Equipment		

***BOLD** denotes minimum requirements to be completed and reviewed prior to entry.



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CONTINUOUS MONITORING (Record continuous monitoring results every 2 hours)

Tests to be Taken	Permissible Entry Level (PEL)	Initial Reading
Percent of Oxygen	19.5% - 23.5%	
Lower Flammable Limit (LFL)	Under 10%	
Carbon Monoxide	+35 PPM	
Aromatic Hydrocarbon	+1 PPM (5 PPM *)	
Hydrogen Cyanide (Skin)	4 PPM*	
Hydrogen Sulfide	+10 PPM (15 PPM*)	
Ammonia	35 PPM*	

(*) Denotes Short-term exposure limit: Employee can work in the area up to 15 minutes.

(+) Denotes 8 hour Time Weighted Average: Employee can work in area 8 hours (longer with appropriate respiratory protection).

Periodic Readings

1st 2nd 3rd 4th

Test Taken	Time	Level	Time	Level	Time	Level	Time	Level
Percent of Oxygen								
Lower Flammable Limit (LFL)								
Carbon Monoxide								
Aromatic Hydrocarbon								
Hydrogen Cyanide (Skin)								
Hydrogen Sulfide								
Ammonia								

Atmospheric Testing Device

Gas Monitor Name	Model/Type	Serial#/Unit#	Calibration Date
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Emergency Numbers

Site Safety Representative	Fire/Ambulance
Site Security	Gas Detector Support