

Salt Lake Community College

Confined Space Safety Program



Prepared By:

Environmental Health and Safety

November 2004

Intended use of this program:

The purpose of this program is to establish a Confined Space Safety Plan and procedures for entering confined spaces. Supervisory employees are responsible to ensure that proper procedures are followed in all phases of confined space entry operations.

Responsibility:

The Facilities Division Management Team in cooperation with the Environmental Health and Safety Manager share the responsibility to follow the "Confined Space Safety" plan. All employees that may have the need to enter defined and identified confined spaces shall be instructed as to the significance of Confined Space Safety procedures. This training is to be conducted by Facilities Division supervisors to all employees that they feel need it.

Definitions:

Confined space:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
- (3) Is not designed for continuous employee occupancy.

Non-permit confined space:

A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Permit required confined space: (one or more of these characteristics)

- (1) Contains or has the potential to contain a hazardous atmosphere;
- (2) Contains a material that has a potential for engulfing an entrant;
- (3) Has an internal configuration such that the entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section: or
- (4) Contains any other recognized serious safety or health hazard.

Procedures:

- 1- The initial step is the assessment of spaces that are confined spaces under the definitions in this plan. It must be determined if the spaces are permit or non-permit required. It is the on-going responsibility of the Facilities Management Team to see that new facilities are reviewed as potential confined spaces and that these changes are added to the procedure. (See Appendix A for list of confined spaces at Salt Lake Community College)
- 2- Only trained employees will perform work in a confined space. Supervisors will assure that only authorized employees are permitted to enter confined spaces. Supervisors have the responsibility to identify the employees who will enter confined spaces.
- 3- Signs will be posted on or near permit spaces in the facilities. Signs are not practical nor feasible for the street type manholes thus all those areas are automatically considered confined spaces and only authorized employees will have access. Warning signs will be placed on interior tanks or processing equipment.
- 4- The safety equipment to be used in a confined space must be inspected and certified by the Environmental Health and Safety Manager. The equipment includes but is not limited to:

Ladders
Personnel-hoists
Safety harness or lifeline
Gas monitors
Power ventilators
Respiratory protection devices
Communications equipment (telephones and radios)

- 5- ***A Confined Space Entry Hazardous Atmosphere Work Permit*** must be issued for each permit required confined space entry. The permit will be properly filled out and followed. Permits may be granted for the duration of the project requiring entry. The permit is valid as long as the conditions set out in the permit are met. This permit will be issued, tracked and filed by the Environmental Health and Safety Manager. A permit may be required on non-permit entry required confined spaces if requested by the entrants or by the Environmental Health and Safety Manager. Specific permit instructions are included in Appendix B.
- 6- Testing of the air within the confined space must be performed on a permit entry required confined space prior to entry to determine oxygen content, toxic gas potential and flammable or explosive atmospheres. Additional tests may be required depending on entry conditions.
- 7- If the space meets the following air quality conditions then entrance can be made without a self contained breathing apparatus or continuous airline with an escape bottle:
- Oxygen level between 19.5% and 23.5%
 - Flammable vapors below 10% of the lower flammable limit (LFL)
 - Carbon Monoxide below 35 ppm
- Even under these conditions the entrant may be required to have respiratory protection.
- 8- If the atmosphere does not meet the air quality criteria stated above then the area must be ventilated (at least 750 cfm) and purged to bring the atmosphere to below dangerous levels. The

ventilation equipment shall be explosion proof if it is placed inside the confined space. If ventilation is necessary to enter the space then continuous monitoring must take place as long as employees are in the confined space.

- 9- A minimum two person crew is required. If the space and the entry are difficult, more employees may be required.
- 10- If the vertical entrance is more than 12 feet, a personnel lift must be set up.
- 11- If the space is a manhole, once the hatch is removed, a portable barrier must be installed if the partner is not stationed next to the manhole.
- 12- While the employee is in the confined space his/her partner must remain alert. Radio communication must be available to the entrant and his/her partner during the entry.

Note: This list may not be inclusive of all facilities at Salt Lake Community College. The Facilities Division is responsible for keeping this list as current as possible. Use the definition criteria in this policy to determine if the policy applies.

Permit Required

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- 1- Condenser Water Storage Tank- AD Building Chiller Room
 - 2- SCC swimming pool surge tanks (2)
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No Permit Required

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- 1- Manholes
 - S & I East Loop Chiller (Redwood)
 - LAC BB Equipment Room
 - LIB JC Cooling Tower
 - LHM (water, sewer, telephone)
 - 2- Redwood Campus Heat Plant Boilers (5)
 - 3- Jordan Campus Boilers (2)
 - 4- SCC boilers (3)
 - 5- Jordan Campus Cooling Tower Sump
 - 6- Jordan Campus Tunnels
 - 7- Redwood Campus Tunnels
 - 8- All cooling tower distribution nozzle areas (Redwood)
 - 9- Redwood Campus secondary sprinkler sump pump
 - 10- Equipment manhole under fountain (Redwood Quad)
 - 11- SCC fountain sumps (2)
 - 12- SCC diving swimming pool (when empty)
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Permit Valid for 8 hours only

Date and Time Issued: _____

Confined Space I.D. _____

Personnel: Entrant _____ Partner _____

Atmospheric Tests: Time _____

Oxygen _____% CO _____ppm

Explosive _____% LEL Toxic _____ppm

Testers Signature _____

Ventilation Required Yes ___ No ___

Atmospheric Tests After Ventilation: Time _____

Oxygen _____% CO _____ppm

Explosive _____% LEL Toxic _____ppm

Testers Signature _____

Safety Equipment Present:

Periodic Atmospheric Tests:

Signature of Entrant _____