CONFINED SPACE PROGRAM

1.0 PURPOSE

The purpose of the Confined Space program is to provide basic guidelines for the safe entry and work within the various confined spaces throughout CSU East Bay, and to comply with California Code of Regulations (CCR), Title 8, Article 108, Sections 5156-5159.

2.0 SCOPE

This program establishes requirements for all employees and non-university employees (contractors) who work in confined space environments at CSUEB, including but not limited to: entry employees; attendants/standbys; first aid responders; rescue personnel; hazardous materials response; facilities management; facilities planning; and contractors.

3.0 POLICY STATEMENT

3.1 Unauthorized entry is forbidden.

3.2 CSUEB employees will perform work only in non-permit confined space.

3.3 Entry for emergency purpose(s) and in permit requir

4.1.4 Assists in the identification of confined space locations.

4.2 Supervisor

4.2.1 Ensure confined space training is provided to applicable employees.

4.2.2 Maintain a current listing of employees who have completed confined space training.

4.2.3 Ensure employees in their department understand and follow the procedures in this program.

4.2.4 Work with EHS to identify all confined spaces on campus.

4.3 Employee

4.3.1 Understand and follow the procedures and practices developed under this program.

4.4 Contractors

4.4.1 Obtain any available information regarding confined space hazards and entry operations from appropriate CSUEB representative.

4.4.2 Coordinate entry operations with appropriate CSUEB representative, when both CSUEB employees and contractor employees will be working in or near a confined space.

4.4.3 Inform appropriate CSUEB representative of their confined space program that will be followed and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

4.4.4 Submit a copy of Confined Space Program to appropriate CSUEB representative; including rescue procedures, permit and atmospheric testing for permit required confined space(s); and pre-entry log, atmospheric testing for non-permit confined space(s). Contractors failing to adhere to the provisions of Cal/OSHA Confined Space Requirements will be asked to terminate their work until requirements are brought into compliance.

4.4.5 Submit energy control procedures, in writing, if involved in lockout of equipment or machinery. Contractors failing to adhere to the provisions of Cal/OSHA Hazardous Energy Control standard

will be asked to terminate their work until their program is brought into compliance.

4.4.6 Restrict unauthorized access to confined space work area. If this is impractical or cannot be accomplished, CSUEB representative must assure the contractor's compliance with proper work procedures.

4.5 Facilities Planning or Facilities Management

4.5.1 Inform and apprise the contractor of the elements, including the hazards identified and any experience with the confined space(s) that make the space in question a confined space.

4.5.4 Review the contractor's confined space program for compliance with Cal/OSHA and CSUEB.

4.5.3 Appr

5.3.1 Contains or has a potential to contain a hazardous atmosphere;

5.3.2 Contains a material that has the potential for engulfing an entrant;

5.3.3 Has an internal configuration such that an 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

5.3.4 Contains any other recognized serious safety or health hazard.

5.4 Confined Space Team:

5.4.1 The entrant does the work within the space.

5.4.2 The attendant remains outside the space while the work is being done.

5.4.3 The entry supervisor authorizes the space safe to enter.

5.4.4 The rescue team is personnel designated to rescue entrant(s).

6.0 TRAINING

6.1 Training will be provided to each affected employee:

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6.4 The certification will be available for inspection by employees.

7.0 PRE-ENTRY PROCEDURES FOR NON-PERMIT CONFINED SPACE (Entry without Permit)

7.1 A space can be considered a non-permit confined space if the below conditions can be demonstrated.

7.1.1 The only hazard posed by the permit space is an actual or potential hazardous atmosphere;

7.1.2 Continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry.

7.1.3 Monitoring and inspection data supports 7.1.1 and 7.1.2 (above).

7.1.4 If an initial entry is required to obtain data required for 7.1.1 and 7.1.2, the entry will be performed in compliance with a permit required confined space.

7.1.5 If welding or high voltage work is to be done, or if the confined space is a blocked sewer, permit required confined space procedures will be followed.

7.2 The below items will be completed before entry and documented on the pre-entry log. Maintain the pre-entry log at the jobsite for duration of job. **See Appendix I for log.**

7.2.1 Control of atmospheric and engulfment hazards:

7.2.1.1

7.2.4 Test the atmosphere within the space to determine whether dangerous air contamination and/or oxygen deficiency exists. Only detector tubes and/or alarm type gas monitors and explosion meters will be used.

7.2.4.1 The minimum parameters to be monitored are oxygen levels, lower flammability level (LFL), and hydrogen sulfide concentration. The hazardous levels are as follows:

Atmospheric oxygen concentration levels below 19.5% or above 23.5% at sea level.
Flammable or explosive gas, vapor, or mist in a concentration greater than 10% of its LFL or lower explosive limit (LEL).
Hydrogen sulfide concentration greater than 10ppm permissible exposure limit (PEL) which is the maximum permitted 8-hour time weighted average (TWA).

7.2.4.2 Some gases are lighter than air and will be found around the top of the confined space. Therefore, it is necessary to test all areas (top, middle and bottom) of a confined space.

7.2.4.3 All testing must be performed by a Qualified Person using approved equipment.

7.2.4.4 All equipment must be used and calibrated according to manufacturers' instructions and all results recorded on the atmospheric monitoring results sheet. This sheet will be maintained at the work site for the duration of the job.

7.2.4.5 The entry supervisor will certify in writing, based upon the pre-entry testing results that all hazards have been eliminated. Supervisor authorization section can be found on the bottom of the pre-entry checklist.

7.2.4.6 Affected employees can review the testing results.

8.0 INITIAL AIR MONITORING PROCEDURES

8.1 Monitoring will be performed outside the space before opening the cover.

8.2 If the air test is acceptable, next crack open the cover and place the probe inside a test hole in the top of the cover.

8.3 Next, open the cover and test the top and every four (4) feet until just above the bottom of the space.

8.4 Allow at least one second for each foot of hose on

10.2.2 Entrants should not enter a confined space until forced air ventilation has eliminated any hazardous atmosphere;

10.2.3 The forced air ventilation should be directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;

10.2.4 The air supply for the forced air ventilation will be from a clean source and may not increase the hazards in the space;

10.2.5 The atmosphere within the space will be test as necessary to ensure that the continuous force air ventilation is preventing the accumulation of a hazardous atmosphere.

11.0 NECESSARY EQUIPMENT FOR NON-PERMIT CONFINED SPACE

11.1 Atmospheric monitoring Equipment – alarm type four gas meter.

11.2 Ventilating equipment, if necessary.

11.3 Communications equipment.

11.4 Personal protective equipment – hard hat, etc.

11.5 Lighting equipment to enable employees to see well enough to work safely and exit the space quickly in an emergency.

11.6 Barriers and shields to protect the confined space work area from unauthorized entry.

11.7 Ladders and similar equipment required for safe entry and exit.

11.8 Retrieval system – harness and tripod.

11.9 Any other necessary equipment.

12.0 ENTRY PROCEDURES FOR NON-PERMIT CONFINED SPACE

12.1 At least two and preferably three employees will conduct all work operations in a confined space.

12.2 Check the pre-entry log to ensure the space has been authorized to be entered by the entry supervisor.

any warning sign or symptom of exposure to a dangerous situation or the entrant detects a prohibited condition or an evacuation alarm is activated.

14.0 DUTIES OF ATTENDANT

14.1 Knows the hazard that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

14.2 Is aware of possible behavioral effects of hazard exposure in authorized entrants.

14.3 Continuously maintains an accurate count of authorized entrant(s) in the confined space.

14.4 Remains outside the confined space during entry operations until relieved by another attendant.

14.5 Communicates with authorized entrant(s) as necessary to monitor entrant status and to alert entrant(s) of the need to evacuate the space if the attendant detects a prohibited condition; if the attendant detects the behavioral effects of hazards exposure in an authorized entrant; if the attendant detects a situation outside the space that could endanger the authorized entrant; or if the attendant cannot effectively and safely perform al658(s)-1.7465(i)-2.53653658(e)d)-0.956417( )-0.479431(e)3.a82.53658(1.57m0.958(

15.2 Verifies, by checking that the appropriate entries have been made on the pre-entry checklist.

15.3 Authorizes the confined space for entry.

15.4 Verifies that rescue procedures will be followed and that the means for summoning additional services are operable.

15.5 Determines that acceptable entry conditions will be maintained.

16.0 EMERGENCY AND RESCUE PROCEDURES FOR NON-PERMIT CONFINED SPACE

16.1 Self rescue is the preferred plan if the entrant(s) is still able to escape from the space unaided and as quickly as possible.

16.1.1 Whenever authorized entrant recognize their own symptoms of exposure to a dangerous atmosphere.

16.1.2 Whenever authorized entrant detects a prohibited condition.

16.2 Non-entry rescue is the approach to take when self rescue is not possible.

16.2.1 To facilitate non-entry rescue, retrieval systems will be used whenever an authorized entrant enters a confined space, unless the retrieval equipment would not contribute to the rescue of the entrant.

16.2.2 The retrieval system (harness and tripod) will meet the following requirements:

Each authorized entrant will use a chest or full body

the rescuer becomes aware that rescue is necessary. The mechanical device must be able to retrieve personnel from vertical type permit spaces more than 5 feet deep.

16.3 It is important to know that the period of time for successful rescue is very limited. Otherwise, a rescue attempt will become body retrieval. After only four minutes without oxygen, it is very likely that a worker will experience asphyxiation, which may result in brain damage or death.

16.4 Contact UPD to summons emergency services.

17.0 PERMIT REQUIRED CONFINED SPACE

17.1 All spaces are considered to be permit required confined spaces until the pre-entry procedures demonstrate otherwise.

17.2 Work in a permit required confined space will be performed by non-university employees (contractor).

17.3 Review the contractor's permit required confined space program for the below elements.

17.3.1 Implement measures necessary to prevent unauthorized entry;

17.3.2 Identify and evaluate the hazards of permit spaces before employees enter them;

17.3.3 Implement means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to the following:

Specifying acceptable entry conditions;
Isolating the permit space;
Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;
Provide pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards; and
Verify that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

17.3.4 Provide an entry permit that authorizes entry to a permit space and identifies the following:

The permit space to be entered;
The purpose of the entry;
The date and the authorized duration of the entry permit;
The authorized entrants within the permit space, by name or by such other means that will enable the