Tooele Technical College

Confined Space Program

Scope and Application

This document contains requirements for practices and procedures to protect campus employees from the hazards of entry into permit-required confined spaces.

Definitions

"Acceptable entry conditions" means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

"Attendant" means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the district's permit space program.

"Authorized entrant" means an employee who is authorized by the school district to enter a permit space.

"Blanking or blinding" means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

"Confined space" means a space that:

(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.

"Double block and bleed" means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

"Emergency" means any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

"Engulfment" means the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

"Entry" means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

"Entry permit (permit)" means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in paragraph (f) of this section.

"Entry supervisor" means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

"Hazardous atmosphere" means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

(1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);

(2) Airborne combustible dust at a concentration that meets or exceeds its LFL;

NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.

(3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

(4) Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, which could result in employee exposure in excess of its dose or permissible exposure limit;

NOTE: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

(5) Any other atmospheric condition that is immediately dangerous to life or health.

NOTE: For air contaminants for which OSHA has not determined a dose or permissible exposure

limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, section 29 CFR 1910.1200, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

"Hot work permit" means the employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

"Immediately dangerous to life or health (IDLH)" means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

NOTE: Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

"Inerting" means the displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.

"Isolation" means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

"Line breaking" means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

"Non-permit confined space" means 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.

"Oxygen deficient atmosphere" means an atmosphere containing less than 19.5 percent oxygen by volume.

"Oxygen enriched atmosphere" means an atmosphere containing more than 23.5 percent oxygen by volume.

"Permit-required confined space (permit space)" means a confined space that has one or more of the following characteristics:

(1) Contains or has a potential to contain a hazardous atmosphere;

(2) Contains a material that has the potential for engulfing an entrant;

(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

(4) Contains any other recognized serious safety or health hazard.

"Permit-required confined space program (permit space program)" means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

"Permit system" means the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

"Prohibited condition" means any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

"Rescue service" means the personnel designated to rescue employees from permit spaces.

"Retrieval system" means the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

"Testing" means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

NOTE: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

General Requirements

The college shall evaluate each campus facility to determine if any spaces that meet a definition of a permit-required confined space. A list of these permit confined spaces is listed in Appendix A of this document. The list was compiled by using the OSHA decision flow chart found in Appendix B of this document.

If the workplace contains permit required confined spaces, the college shall inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces. The signs shall read DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER .

General Permit Required Confined Space Procedures

The following requirements apply to entry into permit confined spaces:

1. Any conditions making it unsafe enter the confined space shall be eliminated before the workers enter.

2. If entering a vault, tunnel, or manhole and after entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects falling into the space.

3. Before an employee enters the confined space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Any employee who enters the space shall be provided an opportunity to observe the pre-entry testing.

4. There cannot be any hazardous atmosphere within the confined space, whenever an employee is inside the space.

5. An employee may not enter the space until the forced air ventilation or some other method has eliminated the hazardous atmosphere.

6. The forced air ventilation shall be so 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.

7. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.

8. The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space will be provided with an opportunity to observe the periodic atmospheric testing.

9. If a hazardous atmosphere is detected during entry, each employee shall leave the space immediately and the space will be evaluated to determine how the hazardous atmosphere developed. Measures will then be implemented to protect employees from the hazardous atmosphere, before any subsequent entry takes place.

10. The facilities manager will verify that the space is safe for entry and that the pre-entry measures required have been taken by means of a written certification that contains the date, the location of the space, and the signature of the person providing the certification. The certification shall be made before entry, and shall be made available to each employee entering the space.

11. When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, the employer shall reevaluate that space and, if necessary, reclassify it as a permit-required confined space.

Reclassification of a Permit Required Confined Space

A space classified by the college as a permit-required confined space may be reclassified as a non-permit confined space under the following procedures:

1. If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.

2. If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed as if the space were still classified as a permit required confined space. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated. NOTE: control of atmospheric hazards through forced air ventilation does not constitute elimination of the hazards.

3. The college will document the basis for determining that all hazards in a permit space have been eliminated, through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space.

4. If hazards arise within a permit space that have been declassified to a non-permit space, each employee in the space shall exit the space. The college shall then reevaluate the space and determine whether it must be reclassified as a permit required confined space.

Contractor Use of District Permit Required Confined Spaces

When the college hires another employer (contractor) to perform work that involves permit required space entry, the district will:

1. Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program that meets the college health and safety requirements.

2. Apprise the contractor of the elements, including the hazards identified and the previous experience with the space, that make the space in question a permit required confined space.

3. Apprise the contractor of any precautions or procedures that the college has implemented for the protection of employees in or near permit spaces, where contractor personnel will be working;

4. Coordinate entry operations with the contractor, when both college personnel and contractor personnel will be working in or near permit spaces.

5. Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed, and regarding any hazards confronted or created in permit spaces during entry operations.

Specific Contractor Requirements

In addition to complying with the permit space requirements that apply to all employers, each contractor who is retained to perform permit required confined space entry operations on college property will:

1. Obtain any available information regarding permit space hazards and entry operations from the school district.

2. Coordinate entry operations with the college, when both college employees and contractor personnel will be working in or near permit spaces.

3. Inform the college of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

College Permit Required Confined Space Policy and Procedure Determination

The permit-required confined space program will include the following:

1. Implement the measures necessary to prevent unauthorized entry of the problematic spaces.

2. Identify and evaluate the hazards of permit spaces before employees enter them.

3. Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following: specifying acceptable entry conditions; providing each authorized entrant with the opportunity to observe any monitoring or

testing of permit spaces; isolating the permit space; purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards; providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards; and verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

Permit Required Confined Space Equipment

The college will provide the following equipment for the permit required confined space program, maintain the equipment, and ensure that employees properly use the equipment:

1. Hazardous atmosphere testing and monitoring equipment, such as a calibrated four gas meter.

2. Ventilating equipment needed to obtain acceptable entry conditions, such as fans and forced air ductwork.

3. Communications equipment, such as walkie-talkies or other means of communication.

4. Personal protective equipment, insofar as feasible engineering and work practice controls do not adequately protect employees.

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

6. Barriers and shields as necessary for a safe work environment.

7. Equipment, such as ladders, needed for safe ingress and egress by authorized entrants.

8. Rescue and emergency equipment, unless the equipment is provided by local rescue services.

9. Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Permit Required Confined Space Health and Safety Hazard Evaluation

The college will evaluate permit space conditions as follows when entry operations are conducted:

1. Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working.

2. Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations; and

3. When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.

4. Provide each authorized entrant an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces.

5. Reevaluate the permit space in the presence of any authorized who requests that the school district conduct such reevaluation because the entrant or representative has reason to believe that the evaluation of that space may not have been adequate;

6. Immediately provide each authorized entrant with the results of any atmospheric testing that was conducted.

Permit Required Confined Space Attendants

The college will provide at least one attendant outside the permit required confined space into which entry is authorized, for the duration of entry operations.

If multiple spaces are to be monitored by a single attendant, include in the permit program the means and procedures to enable the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distraction from the attendant's responsibilities.

Designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required.

Additional Permit Required Confined Space Program Requirements

The college will develop and implement procedures for summoning rescue and emergency services, for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue.

The college will also develop and implement a system for the preparation, issuance, use, and cancellation of entry permits. Procedures will also be implemented to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one employer do not endanger the employees of any other employer.

Further, procedures (such as closing off a permit space and canceling the permit) necessary for concluding the entry after entry operations have been completed and the review of entry operations when the employer has reason to believe that the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized.

Review of the Permit Required Confined Space Written Program

Examples of circumstances requiring the review of the permit space program are any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near-miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program. Review of the program will take place on an annual basis, using cancelled permit confined space entry permits to ensure that employees participating in entry operations are protected from permit space hazards. If no permit confined space entry is performed during a 12-month period, no review is necessary.

Permit Required Confined Space Procedures

1. Before entry is authorized, the risk manager will document the completion of measures required, as outlined previously with regards to confined space evaluation, etc.

2. Before entry begins, the entry supervisor identified on the permit shall sign the entry permit to authorize entry. The completed permit will be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective method, so that the entrants can confirm that pre-entry preparations have been completed.

3. The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.

4. The entry supervisor shall terminate entry and cancel the entry permit when the entry operations covered by the entry permit have been completed; or a condition that is not allowed under the entry permit arises in or near the permit space.

5. The college will retain each canceled entry permit for at least one year to facilitate the annual review of the permit-required confined space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

The Permit Confined Space Entry Permit

The entry permit that documents compliance with applicable regulations and authorizes entry to a permit space will identify 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 to enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space; the personnel, by name, currently serving as attendants; the individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry; the hazards of the permit space to be entered; the measures used to isolate the permit space and to eliminate or control permit space hazards before entry; the acceptable entry conditions; the results of initial and periodic atmospheric tests performed and accompanied by the names or initials of the testers and by a time and date of when the tests were performed; the rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services; the communication procedures used by authorized entrants and attendants to maintain contact during the entry; equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided; and any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety; and any additional permits, such as for hot work, that have been issued to authorize work in the permit space. A sample permit is included in Appendix C of this document.

Permit Required Confined Space Training

The college will provide training so that all employees whose work is regulated by this document acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

Training shall be provided to each affected employee before the employee is first assigned duties that required permit confined space entry, before there is a change in assigned duties; whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained; whenever the school district has reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this section, and shall introduce new or revised procedures, as necessary, for compliance.

The college will document all permit required confined space training. The certification shall contain each employee's name, the signatures of the trainers, and the date of the training. The certification shall be available for inspection by college employees.

Duties of Authorized Permit Required Confined Space Entrants.

Workers assigned to enter a permit required confined space will know the hazards that may be faced during entry, including information on the mode, signs or symptoms, consequences of the exposure; and how to properly use personal protective equipment.

The entrant will communicate with the attendant as necessary, to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.

The entrant will alert the attendant whenever there is recognition of any warning sign or symptom of exposure to a dangerous situation, or the entrant detects a prohibited condition.

The entrant will exit from the permit required confined space as quickly as possible whenever an order to evacuate is given by the attendant or the entry supervisor, the entrant recognizes any warning sign or symptom of exposure to a dangerous situation, the entrant detects a prohibited condition, or an evacuation alarm is activated.

Duties of Attendants

The college will ensure that each attendant knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure; is aware of possible behavioral effects of hazard exposure in authorized entrants; continuously maintains an accurate count of authorized entrants in the permit space, and ensures that the means used to identify authorized entrants accurately identifies who is in the permit space.

The attendant will remain outside the permit space during entry operations until relieved by another attendant.

The attendant will also communicate with authorized entrants as necessary to monitor entrant status, and to alert entrants of the need to evacuate the space if necessary.

The attendant will also monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space, and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:

1. If the attendant detects a prohibited condition.

2. If the attendant detects the behavioral effects of hazard exposure in an authorized entrant.

3. If the attendant detects a situation outside the space that could endanger the authorized entrants.

4. If the attendant cannot effectively and safely perform all the duties required of them.

5. Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.

6. When an unauthorized person approaches or enters a permit space while entry is underway, the person will be warned that they are to stay away from the permit space, and that they must immediately leave. The entry supervisor and the entrants will be informed about the situation.

Duties of Entry Supervisors

Each entry supervisor will know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure. They will also verify by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.

The entry supervisor will terminate the permit required confined space entry, and cancel the permit if necessary. The supervisor will also verify that rescue services are available and that the means for summoning them are operable.

Unauthorized individuals who enter or who attempt to enter the permit space during entry operations will be removed.

Whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, entry operations will remain consistent with terms of the entry permit, and acceptable entry conditions will be maintained.

Rescue and Emergency Services

The college will evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified. Depending on the circumstances such as using respiratory protection, the school district may require a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres.

College employees who have been designated to provide permit space rescue and emergency services will be provided with the personal protective equipment (PPE) needed to conduct permit space rescues safely, and train affected employees so they are proficient in the use of that PPE, at no cost to those employees. These workers will be trained to provide these rescue tasks. The school district will ensure that such employees successfully complete the training required to establish proficiency as an authorized permit required confined space entrant.

These employees will also be trained in basic first-aid and cardiopulmonary resuscitation (CPR). The employer shall ensure that at least one member of the rescue team or service holding a current certification in first aid and CPR is available; and will ensure that rescue employees complete a simulated rescue operation in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit spaces.

Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.

To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.

Retrieval Systems

Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish presents a profile small enough for the successful removal of the entrant. Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.

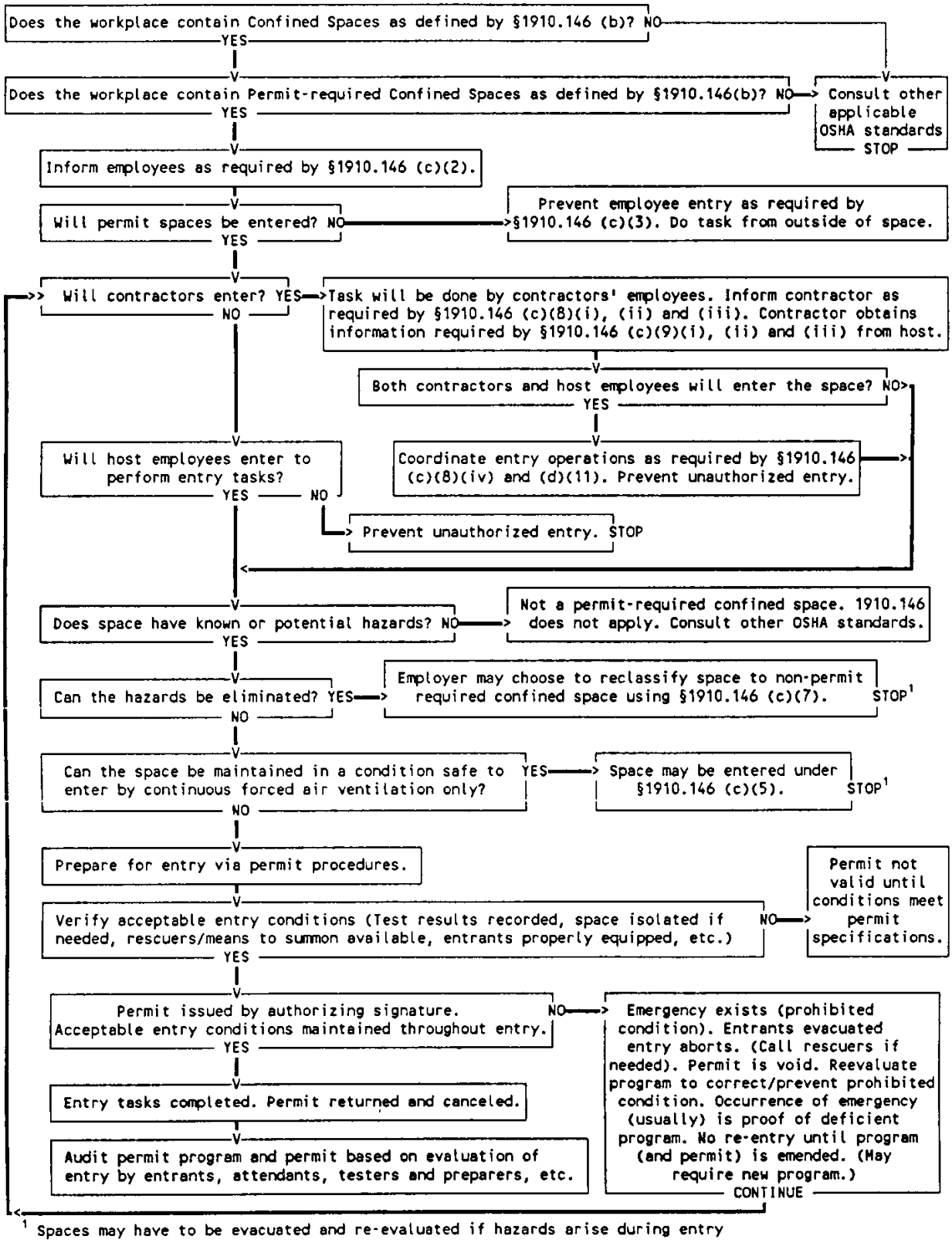
The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep

If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

Appendix A, List of all Tooele Technical College Permit Required Confined Spaces

1.
2.
3.
4.
5.

Appendix B, Confined Space Decision Flow Chart



[1] Spaces may have to be evacuated and re-evaluated if hazards arise during entry

Appendix C, Permit Required Confined Space Entry Permit

Confined Space Entry Permit

Date and Time Issued: _____ Date and Time Expires: _____

Job site/Space I.D.: _____ Job Supervisor:_____

Equipment to be worked on: _____ Work to be performed: _____

Stand-by personnel: _____ _____ _____

1. Atmospheric Checks: Time _____
   Oxygen _____%
   Explosive _____% L.F.L.
   Toxic _____PPM

2. Tester's signature: _____

3. Source isolation (No Entry):

	N/A	Yes	No
Pumps or lines blinded,	( )	( )	( )
disconnected, or blocked	( )	( )	( )

4. Ventilation Modification:

	N/A	Yes	No
Mechanical	( )	( )	( )
Natural Ventilation only	( )	( )	( )

5. Atmospheric check after isolation and Ventilation:

Oxygen _____%	>	19.5	%
Explosive _____% L.F.L	<	10	%
Toxic _____PPM	<	10	PPM H(2)S

   Time _____
   Testers signature: _____

6. Communication procedures: _____
_____

7. Rescue procedures: _____
_____
_____
_____

8.

Entry, standby, and back up persons:	Yes	No
Successfully completed required training?		
Is it current?	( )	( )

9.

Equipment:	N/A	Yes	No
Direct reading gas monitor - tested	( )	( )	( )
Safety harnesses and lifelines for entry and standby persons	( )	( )	( )
Hoisting equipment	( )	( )	( )
Powered communications	( )	( )	( )
SCBA's for entry and standby persons	( )	( )	( )
Protective Clothing	( )	( )	( )
All electric equipment listed Class I, Division I, Group D and Non-sparking tools	( )	( )	( )

10. Periodic atmospheric tests:

Oxygen	____%	Time ____	Oxygen	____%	Time ____
Oxygen	____%	Time ____	Oxygen	____%	Time ____
Explosive	____%	Time ____	Explosive	____%	Time ____
Explosive	____%	Time ____	Explosive	____%	Time ____
Toxic	____%	Time ____	Toxic	____%	Time ____
Toxic	____%	Time ____	Toxic	____%	Time ____

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit Prepared By: (Supervisor)_____

Approved By: (Unit Supervisor)_____

Reviewed By (Cs Operations Personnel) :

_____ _____

(printed name) (signature)

This permit to be kept at job site. Return job site copy to Safety Office following job completion.

Copies: White Original (Safety Office)
Yellow (Unit Supervisor)
Hard(Job site)

Appendix D - 2

ENTRY PERMIT

PERMIT VALID FOR 8 HOURS ONLY. ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED

DATE: - - SITE LOCATION and DESCRIPTION _____

PURPOSE OF ENTRY _____

SUPERVISOR(S) in charge of crews Type of Crew Phone #

_____

_____

COMMUNICATION PROCEDURES _____

RESCUE PROCEDURES (PHONE NUMBERS AT BOTTOM) _____

_____

* BOLD DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY*

REQUIREMENTS COMPLETED	DATE	TIME
Lock Out/De-energize/Try-out	____	____
Line(s) Broken-Capped-Blanked	____	____
Purge-Flush and Vent	____	____
Ventilation	____	____
Secure Area (Post and Flag)	____	____

Breathing Apparatus	____	____
Resuscitator - Inhalator	____	____
Standby Safety Personnel	____	____
Full Body Harness w/"D" ring	____	____
Emergency Escape Retrieval Equip	____	____
Lifelines	____	____
Fire Extinguishers	____	____
Lighting (Explosive Proof)	____	____
Protective Clothing	____	____
Respirator(s) (Air Purifying)	____	____
Burning and Welding Permit	____	____

Note: Items that do not apply enter N/A in the blank.

**RECORD CONTINUOUS MONITORING RESULTS EVERY 2 HOURS

CONTINUOUS MONITORING** Permissible _____

TEST(S) TO BE TAKEN	Entry Level								
PERCENT OF OXYGEN	19.5% to 23.5%	___	___	___	___	___	___	___	___
LOWER FLAMMABLE LIMIT	Under 10%	___	___	___	___	___	___	___	___
CARBON MONOXIDE	+35 PPM	___	___	___	___	___	___	___	___
Aromatic Hydrocarbon	+ 1 PPM * 5PPM	___	___	___	___	___	___	___	___
Hydrogen Cyanide	(Skin) * 4PPM	___	___	___	___	___	___	___	___
Hydrogen Sulfide	+10 PPM *15PPM	___	___	___	___	___	___	___	___
Sulfur Dioxide	+ 2 PPM * 5PPM	___	___	___	___	___	___	___	___
Ammonia	*35PPM	___	___	___	___	___	___	___	___

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

+ 8 hr. Time Weighted Avg.: Employee can work in area 8 hrs (longer with appropriate respiratory protection).

REMARKS:_____

GAS TESTER NAME & CHECK #	INSTRUMENT(S) USED	MODEL &/OR TYPE	SERIAL &/OR UNIT #
_____	_____	_____	_____
_____	_____	_____	_____

SAFETY STANDBY PERSON IS REQUIRED FOR ALL CONFINED SPACE WORK

SAFETY STANDBY PERSON(S)	CHECK #	CONFINED SPACE ENTRANT(S)	CHECK #	CONFINED SPACE ENTRANT(S)	CHECK #
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

SUPERVISOR AUTHORIZING - ALL CONDITIONS SATISFIED_____

DEPARTMENT/PHONE _____

AMBULANCE xxx FIRE xxx Risk Management xxx-xxx-xxxx