

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

PURPOSE:

The purpose of this program is to inform interested persons, including employees, that Baylor University is complying with the OSHA Confined Space Standard, Title 29 Code of Federal Regulations 1910.146. We have determined that this workplace needs written procedures for the evaluation of confined spaces, and where permit-required spaces are identified, we have developed and implemented a permit-required confined space entry program.

SCOPE:

This program applies to all work operations at Baylor University where employees must enter a permit-required confined space as part of their job duties.

DEFINITION:

By OSHA's definition, a **confined space**:

- Is large enough for an employee to enter fully and perform assigned work;
- Is not designed for continuous occupancy by the employee; and
- Has a limited or restricted means of entry or exit.

These spaces may include underground vaults, tanks, storage bins, pits and diked areas, vessels, silos, and other similar areas.

By OSHA's definition, a **permit-required confined space** has one or more of these characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material with the potential to engulf someone who enters the space;
- Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section; and/or
- Contains any other recognized serious safety or health hazards.

RESPONSIBILITY:

The Occupational Health & Safety Specialist is the person having overall responsibility for the Permit-Required Confined Space Program. The Occupational Health & Safety Specialist will review and update the program, as necessary.

Copies of the written program may be obtained from the Occupational Health & Safety Specialist in the office of the Department of Risk Management (710-4586).

Under this program, we identify permit-required spaces in Baylor University, and provide training for our employees according to their responsibilities in the permit space. These employees receive instructions for safe entry into our specific type of confined spaces, including testing and monitoring, appropriate personal protective equipment, rescue procedures, and attendant responsibilities.

This program is designed to ensure that safe work practices are utilized during all activities regarding the permit space to prevent personal injuries and illnesses that could occur.

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

If, after reading this program, you find that improvements can be made, please contact the Department of Risk Management at 710-4586. We encourage all suggestions because we are committed to creating a safe workplace for all our employees and a safe and effective permit-required confined space entry program is an important component of our overall safety plan. We strive for clear understanding, safe work practices, and involvement in the program from every level of the company.

Hazard Evaluation for Permit Spaces

To determine if there are permit-required confined spaces at Baylor University, the Occupational Health & Safety Specialist and Baylor Facility Services Safety/Training Coordinator conduct hazard evaluations of our workplace. These evaluations provide us with the information necessary to identify the existence and location of permit-required confined spaces in our workplace that must be covered by the permit-required confined space entry program. This written hazard evaluation is kept in the office of the Department of Risk Management and in the office of the Safety/Training Manager in the Baylor Facility Services Physical Plant at 1919 S. 1st Street, in Waco, TX.

Preventing Unauthorized Entry

To provide a safe work environment and to prevent exposed employees from accidentally entering a permit space, we have implemented the following procedures to inform all employees of the existence, location, and danger posed by permit spaces in Baylor University. To inform employees of the existence of a permit space, we use a sign reading "DANGER - PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER". To ensure that unauthorized employees do not enter and work in permit spaces, we keep permit spaces secured and labeled with instructions including who to contact if access is required.

Safe Permit Space Entry Procedures

Baylor Facility Services Safety/Training Manager and/or the Occupational Health & Safety Specialist are the Entry Supervisors responsible for authorizing entry and issuing entry permits for work in our permit spaces. The file of permits and related documents are kept in the office of Baylor Facility Services Safety/Training Coordinator. The procedures we follow for preparing, issuing, and canceling entry permits includes the following: Before entry is authorized, the Entry Supervisor will document the completion of required pre-entry measures by preparing an entry permit. Before entry begins, the entry supervisor will sign the entry permit to authorize entry. The completed permit is made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means so that the entrants can confirm that pre-entry preparations have been completed. The duration of the permit does not exceed the time required to complete the assigned task or job identification on the permit.

The entry supervisor will terminate entry and cancel the entry permit when:

- A. The entry operations covered by the permit have been completed; or
- B. A condition that is not allowed under the entry permit arises in or near the permit space.

Baylor Facility Services will retain each cancelled entry permit for at least 1 year to facilitate the

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

required annual review of the permit-required confined space program. Any problems encountered during an entry operation will be noted on the pertinent permit so that appropriate revision to the permit space can be made.

An entry permit that authorizes entry to a permit space will include:

- A. Identification of the space;
- B. Authorized entrant(s);
- C. Eligible attendants;
- D. Signature of authorized entry supervisor;
- E. Test results;
- F. Tester's signature;
- G. Purpose of entry;
- H. Known space hazards;
- I. Measures to be taken to isolate permit spaces and to eliminate or control space hazards;
- J. Name/telephone numbers of rescue and emergency services and means of contacting them;
- K. Date and authorized duration of entry;
- L. Acceptable entry conditions;
- M. Communication procedures;
- N. Additional permits (i.e. hot work) that have been issued authorizing work in the permit space;
- O. Equipment and procedures, including PPE and alarm systems;
- P. Any other information needed to ensure employee safety.

Pre-Entry Evaluation

To ensure the safety and health of our employees, before allowing authorized workers to enter a permit space, we evaluate conditions in that space to determine if the conditions are safe for entry. Any employee entering the space, or the employee's authorized representative, has the opportunity to observe the pre-entry and any subsequent testing. The authorized entrant or that employee's representative also has the option of requesting a reevaluation of the space if they feel that the evaluation was not adequate.

Baylor follows the procedures to evaluate each permit space before entry according to 1910.146(c) (5) (ii) (C). This includes testing the internal atmosphere with a calibrated direct-

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

reading instrument for oxygen content, flammable gases and vapors, and potential toxic air contaminants. We also periodically test the atmosphere of the space to ensure that the continuous ventilation is preventing the accumulation of a hazardous atmosphere.

Certification

According to 1910.146(c) (5) (ii) (H), Baylor verifies, through a written certification that contains the date, location of the space, and signature of the person providing the certification, that the space is safe for entry and that the pre-entry measures required by 1910.146(c) (5) (ii) have been taken,. The entry supervisor is responsible for verifying these procedures. The certification is made before entry and is available to each employee entering the space.

According to 1910.146(c)(5)(iii), Baylor documents the basis for determining that all hazards in a permit space have been eliminated, through a certification that contains the date, location of the space, and signature of the person making the determination. The entry supervisor is responsible for documenting this information. The certification is available to each employee entering the space.

Equipment

To ensure the safety and health of our employees, Baylor University provides appropriate equipment to all employees who work in or near our permit spaces. According to 1910.146(k)(3)(i), each authorized entrant will 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 Baylor University can establish presents a profile small enough for the successful removal of the entrant. Wristlets may be used instead of the chest or full body harness if Baylor University 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.

We provide the following additional equipment to all employees who work in or near our permit spaces: Baylor Facility Services will provide at no cost to the employee all appropriate, adequate, and as necessary personal protective equipment (PPE), testing and monitoring equipment, ventilation equipment, communications equipment, lighting equipment, barriers and shields, ladders or other entrance/exit equipment.

We maintain all equipment in excellent working condition, train the entrants in the correct usage of this equipment, and ensure that all equipment, including that used for personal protection, is used properly.

The entry supervisor of the permit-required confined space entry procedures will be responsible for ensuring proper use of the appropriate equipment by all entrants to the confined space.

Duties: Authorized Entrants

Those persons who have completed the training and are authorized to enter our permit spaces (authorized entrants) are assigned specific duties and responsibilities that must be performed when they work in the permit space. Authorized entrants will know how to use any needed equipment, communicate with attendants as necessary, alert attendants to warning signs or the existence of a hazardous condition, and exit as quickly as possible whenever ordered or alerted

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

(by alarm, cell phone, radio, etc.) to do so.

Authorized entrants of a permit-required confined space shall be trained to the extent that they:

- A. Know the hazards they may face;
- B. Are able to recognize signs or symptoms of exposure;
- C. Have an understanding of the consequences of any exposure to hazards.

Duties: Attendants

Those persons who have completed the training and have been designated as permit space attendants are assigned specific duties and responsibilities that they must perform in permit space job duties. Attendant duties include communicating with entrants as necessary to monitor entrant status, monitor activities inside and outside the permit space and order exit if required. Attendants will also summon rescuers if necessary and prevent unauthorized entry into the confined space. They may also perform non-entry rescues if required. They do not perform other duties that interfere with their primary duty to monitor and protect the safety of authorized entrants at the time of the permit-required confined space entry.

Attendants will be trained to the extent that they know the hazards of the confined spaces, and are aware of behavioral effects of potential exposures. They are also trained to maintain continuous count and identification of authorized entrants, and remain outside the space until relieved.

Duties: Entry Supervisors

Those persons who have completed the training and have been designated as permit space entry supervisors are assigned specific duties and responsibilities that they must perform in permit space job duties. The entry supervisor has the responsibility of issuing confined space permits and knowing the hazards of confined spaces. They also verify that all tests have been conducted and all procedures and equipment are in place before endorsing a permit. The entry supervisor will terminate entry if necessary, cancel permits, and verify that rescue services are available and the means for summoning them are operable. The entry supervisor will also remove unauthorized individuals who enter the confined space.

Training Program

Every employee at Baylor University who faces the risk of confined space entry is provided with training so that each designated employee acquires the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them. Baylor Facility Services Safety/Training Coordinator conducts our permit-required confined space training. All training-related materials, documents, and signed certificates are kept in the office of the Safety/Training Coordinator in the Physical Plant.

When conducting the training, we use classroom as well as audiovisual techniques. New employees are always trained before their initial assignment of duties. *All new employees who may be required to perform work in any permit-required confined space must go through the training program set up and administered by the Safety/Training Manager before beginning their*

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

job duties. When changes occur in any permit-required confined space area, that area is immediately reevaluated by the Safety/Training Manager and the Occupational Health & Safety Specialist, and the proper signage and locking devices are removed and/or installed. Any employees who may work in the area are notified immediately of the changes and what procedures must now be adhered to when working in this area. If we have reason to believe that an employee has deviated from a previously trained procedure or that their knowledge seems inadequate, he/she will be required to go through the entire permit-required confined space training program with the Safety/Training Manager.

Upon successful completion of the Baylor University permit-required confined space training program, each participant receives a certificate which they sign, verifying that they understand the material presented, and that they will follow all University policies and procedures regarding permit space entry. This training is repeated annually.

Rescue and Emergency Services

Rescue services are provided by off-site service by calling 911. Hospitals or treatment facilities will be provided with any material safety data sheets (MSDS) or other information that may aid in the treatment of rescued employees. To familiarize this service with our facility and emergency needs, we provide access to all permit spaces from which rescue may be necessary so the rescue team can develop appropriate rescue plans and practice rescue operations. We also inform the rescue team of the hazards they may confront when called on to perform rescue at the site.

Sub Contractor Entry Procedures

All permit-required confined spaces on campus are secured at all times. Therefore, any outside contractor needing to perform work in these areas must contact the Occupational Health & Safety Specialist to gain access. The Occupational Health & Safety Specialist will ensure that all the proper procedures are performed by each outside contractor before and during access to these spaces.

Post-operations Procedures

Baylor Facility Services will close off a permit space and cancel the permit after entry operations have been completed.

Review-Procedures

To ensure that all employees participating in entry operations are protected from permit space hazards, Baylor University reviews the permit-required confined space entry program on a regular basis. We use the retained, canceled permits from the past 12 months within one year after each entry and revise the program as necessary. Baylor University performs a single, annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review will be performed.

Enforcement

11.2.6 CONFINED SPACE SITUATIONS & PERMITS

Constant awareness of and respect for permit-required confined space entry hazards, and compliance with all safety rules are considered conditions of employment. Supervisors and individuals in the safety and personnel departments reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this permit entry program.

Approved by Risk Management Committee: 7/20/06

Formulated: 05/06

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Revised: 04/09

[Signature on File] _____

Warren A. Ricks
Chairman, Risk Management Committee
Director of Risk Management

Date

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Reagan Ramsower
Vice President for Finance and Administration

Date