

Confined Space Entry Program



California State University, Chico

Department of Environmental Health and Safety

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Confined Space Program Record of Revisions

Revision	By	Date	Description of Revision
1	KW	10-18-21	Relatively minor edits throughout from annual written program audit.

Legend:

KW: Kenny Wahl

1.0

INTRODUCTION

The Federal Occupational Safety and Health Administration (OSHA) estimates that 1.6 million workers enter confined spaces annually. From these entries, it is determined that approximately 5700 result in injury (88% are “lost time”). Every year, on average, 53 workers lose their lives in confined spaces; 60% of these workers die attempting a rescue. Sadly, in 2011, California confined space fatalities accounted for over 13% of the national total.

The hazards associated with confined space entry are numerous, which include, but are not limited to, flammable, toxic, and/or oxygen deficient atmospheres; and the potential for entrapment and engulfment. This program details the requirements that must be strictly followed to ensure the safety of California State University, Chico (CSU, Chico) personnel who work in and around confined spaces.

2.0**SCOPE****Minimum Requirements**

2.1 This Program specifies the minimum requirements to be followed by employees assigned to enter confined spaces that are regulated by the California Division of Occupational Safety and Health (Cal/OSHA). This program, therefore, complies with the content of the following Title 8, California Code of Regulations (8 CCR, Article 108):

- Section 5156. Scope, Application, and Definitions.
- Section 5157. Permit-Required Confined Spaces.
- Section 5158. Other Confined Space Operations¹.

2.2 Application

- a. The Department of Environmental Health and Safety in cooperation with all affected departments, managers, supervisors, and/or employees shall be responsible for implementing the CSU, Chico Confined Space Entry Program.
- b. All University personnel shall be responsible for complying with the content of this program and procedures.
- c. All University personnel shall implement the procedures in the Program as outlined in Section(s) 4.0 through 8.1, as well as, fulfill the requirements for training as outlined in Section 9.0. All portions of this Program shall be applicable to all employees working in confined spaces.

¹ Other confined space operations include construction operations regulated by 8 CCR 1502; agriculture operations (including cotton gins) defined in 8 CCR 3437; marine terminal operations defined in 8 CCR 3460; telecommunication vaults and unvented vaults regulated by 8 CCR 8616; grain handling facilities regulated by 8 CCR 5178; natural gas utility operation within distribution and transmission facility vaults defined in Title 49 Code of Federal Regulations Parts 191, 192 and 193; or electrical utility operations within underground vaults as defined in 8 CCR 2700.

3.0

DEFINITIONS

Acceptable Entry Conditions:

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.

Air Sampling/Monitoring:

Measuring and evaluating the amount of a substance present in the atmosphere to which a worker may be exposed. Samples may be taken continuously or at intervals in the breathing zone of the worker. Continuous air monitoring, however, is considered the best management practice.

Asphyxiant:

A substance that causes oxygen deprivation through atmosphere displacement or hemoglobin interaction (i.e., simple or chemical asphyxiation, respectively).

Atmosphere:

Refers to the gases, vapors, mists, fumes, and dusts within and around a confined space.

Attendant:

An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

Authorized Entrant:

An employee who is authorized by the employer to enter a permit space.

Blanking or Blinding:

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.

Combustible Dust:

A dust capable of undergoing combustion or of burning when subjected to a source of ignition.

Confined Space (5157 General Industry) - A space that:

- a. Is large enough and so configured that an employee can bodily enter and perform assigned work; *and*
- b. Has limited or restricted means for entry or exit; *and*
- c. Is not designed for continuous employee occupancy.

Confined Space (5158 *Other Confined Spaces*):

A space defined by the concurrent existence of the following conditions:

- a. Existing ventilation is insufficient to remove dangerous air contamination, oxygen enrichment and/or oxygen deficiency which may exist or develop; *and*
- b. Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

Contaminant:

Any unwanted substance (e.g., dust, fume, mist, vapor, or gas) in the atmosphere or on surfaces that can be harmful to humans.

Corrosive:

Any substance that can cause destruction of living tissue or inanimate surfaces by chemical action.

Dangerous Air Contamination (5158 *Other Confined Spaces*):

An atmosphere presenting a threat of causing death, injury, acute illness, or disablement due to the presence of flammable and/or explosive, toxic, or otherwise injurious or incapacitating substances.

- a. Dangerous air contamination due to the flammability of a gas or vapor is defined as an atmosphere containing the gas or vapor at a concentration greater than 20 percent² of its lower explosive (lower flammable) limit.
- b. Dangerous air contamination due to a combustible particulate is defined as a concentration greater than 20 percent of the minimum explosive concentration of the particulate. Note: This concentration may be approximated as a condition in which any dust obscures vision at a distance of 10 feet.
- c. Dangerous air contamination due to the toxicity of a substance is defined as the atmospheric concentration immediately hazardous to life or health. Note: This definition of dangerous air contamination due to the toxicity of a substance does not preclude the requirement to control harmful exposures, under the provisions of Article 107, to toxic substances at concentrations less than those immediately hazardous to life or health.

Double Block and Bleed:

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:

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:

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.

² Given the types of spaces covered under 8 CCR 5158, the LFL and MEC thresholds are higher than those found in 8 CCR 5157 (i.e. 20% versus 10%). CSU Chico policy maintains all atmospheres where the LFL or MEC exceeds 10% as "hazardous atmospheres."

Entry:

The action by which a person passes through an opening into a permit-required confined 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):

The written or printed document that is provided by the employer to allow and control entry into a permit space and that contains specified information.

Entry Supervisor:

The person 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. 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.*

Ground Fault Circuit Interrupter (GFCI):

A fast acting circuit breaker that is sensitive to very low levels of current leakage to ground. The interrupter is designed to limit the electric shock to a current and time duration value below that which can produce serious injury.

Hazardous Atmosphere (5157 General Industry):

An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness from one or more of the following causes:

- a. Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL).
- b. Airborne combustible dust at a concentration that meets or exceeds its minimum explosive concentration (MEC); *Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 10-feet or less.*
- c. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- d. Atmospheric concentration of any substance (including radioisotopes) for which a published permissible exposure limit has been exceeded;
- e. Any other atmospheric condition that is immediately dangerous to life or health.

Hot Work:

Work activities, including but not limited to, open flame, the use or operation of equipment or tools potentially capable of creating a spark, elevated temperature, or electrical energy source sufficient to be a potential source of ignition. (Refer to the CSU, Chico Hot Work Program)

Hot Work Permit:

The employer's written authorization to perform operations utilizing an open flame or operations capable of providing any source of ignition.

Immediately Dangerous to Life or Health (IDLH):

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.

Inerting:

The displacement of the atmosphere in a permit space by a noncombustible gas to such an extent that the resulting atmosphere is noncombustible. Note: this procedure produces an IDLH oxygen-deficient atmosphere.

Isolation:

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; lock-out or tag-out of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking:

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.

Lock-Out:

The placement of an approved lockout device on an energy isolating device, in accordance with the University's Control of Hazardous Energy Program (LOTO), ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lower Explosive Limit (LEL)/ Lower Flammable Limit (LFL):

The minimum concentration of vapor or gas in air below which propagation of an explosive or flame does not occur on contact with a source of ignition. Below the LEL or LFL there is too little combustible fuel to sustain a flammable mixture.

Non-permit Confined Space:

A confined space that does not contain any hazard capable of causing death or serious physical harm, or any potential atmospheric hazard capable of causing death or serious injury.

Oxygen Deficient Atmosphere:

An atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen Enriched Atmosphere:

An atmosphere containing more than 23.5 percent oxygen by volume.

Permissible Exposure Limit (PEL):

Is the level of exposure established as the highest level of exposure an employee may be exposed to without incurring the risk of adverse health effects. The PEL is an OSHA-established "legal limit."

Permit-Required Confined Space (permit space):

A confined space that has one or more of the following characteristics:

- a. Contains or has a potential to contain a hazardous atmosphere;
- b. Contains a material that has the potential for engulfing an entrant;
- c. 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
- d. Contains any other recognized serious safety or health hazard.

Permit-Required Confined Space Program:

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. This includes procedures within the CSU, Chico permit-required confined space program.

Permit System:

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:

Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

Purging:

The method by which gases, vapors, or other airborne impurities are displaced from a confined space.

Rescue Service:

The personnel designated to rescue employees from permit spaces.

Retrieval System:

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.

Tag-out:

The placement of a tag-out device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag-out device is removed.

Testing:

The process by which the hazards that may confront entrants of a permit space are identified and evaluated.

Threshold Limit Value (TLV):

TLV is that concentration to which nearly all workers may be repeatedly exposed, day after day (i.e. 8-hours a day/40 hours a week), without adverse effect. The TLV is published by the American Conference of Governmental Industrial Hygienists (ACGIH).

Time Weighted Average (TWA):

Is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.

Toxicity:

The ability of a substance to cause an injury or adverse reaction to living tissue.

4.0

WORK EVALUATION

4.1 Determination

1. The Department of Environmental Health and Safety in cooperation with Facilities Management and Services (FMS) and/or affected departments shall ensure that all spaces within CSU, Chico are evaluated, classified, and documented using the appropriate ***Confined Space Classification Worksheet (found in Attachment B section)***.
2. This evaluation and inventory list shall be reviewed annually and updated as needed.
3. Any space that must be entered in order to be evaluated and classified must be entered using *permit-required confined space* entry procedures until such time as another space classification applies.
4. All new operations must be evaluated by the Department of Environmental Health and Safety to determine if the proposed activity will involve confined space entry.

4.2 Classifications

This procedure addresses four (4) types of CSU, Chico workspaces, i.e. permit-required confined spaces³, non-permit confined spaces (including spaces reclassified as “non-permit spaces”), “other confined spaces,” and restricted access areas. None of the aforementioned spaces shall be entered without the knowledge of the CSU, Chico Department Managers or Supervisors. Moreover, no space addressed in this procedure shall be entered until the hazardous (or potentially hazardous) conditions present in and around the space, including those hazards posed by the work to be performed in the space, are thoroughly assessed, and controlled.

1. *Permit-required Confined Space*—a space that exhibits **ALL** of the following three characteristics:
 - Is large enough and so configured that an employee can bodily enter and perform assigned work; *and*
 - Has limited or restricted means for entry or exit; *and*
 - Was not designed for continuous employee occupancy.

AND possesses **one or more** of the following hazards:

- A hazardous or potentially hazardous atmosphere;
- A material that has the potential for engulfing an entrant;
- 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*
- Any other recognized serious safety or health hazard.

Confined Spaces Entered Using “Alternate Entry Procedures”—Spaces where:

³ 8 CCR 5157(c)(5)(A) offers “alternate entry procedures” where the sole hazard found in a confined space is “atmospheric.” CSU, Chico does not utilize “alternate entry procedures,” as a matter of policy.

- The sole hazard or potential health hazard is atmospheric (e.g., oxygen deficient, toxic, or flammable) and the atmospheric hazard can be controlled through ventilation AND continuous ventilation is used. See Attachment D for details regarding operations involving “*Alternate Entry Procedures.*”

Examples of permit-required confined spaces include sewer and steam manholes, vaults (non-telecommunication), product storage tanks, and grain silos.

2. Non-permit Confined Space—A space that:

- Is large enough and so configured that an employee can bodily enter and perform assigned work; *and*
- Has limited or restricted means for entry or exit; *and*
- Was not designed for continuous employee occupancy.

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

Examples of confined spaces that could be deemed non-permit include crawl spaces and drop ceiling areas⁴.

3. Other Confined Space—Locations where:

- Existing ventilation is insufficient to remove dangerous air contamination and/or oxygen deficiency which may exist or develop.
- Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

AND are regulated by 8 CCR 5158 (Other Confined Space Operations).

Examples of other confined spaces include telecommunication vaults, electrical utility vaults, and trenches.

4. Restricted Access Areas—Locations that:

- Are not confined spaces.
- Not routinely occupied.
- Do not contain hazardous conditions, but due to other unusual conditions (e.g., location and lighting) warrant the employment of special precautions prior to and during entry.

⁴ These confined spaces are only considered “non-permit” spaces when they meet the criterion specified in 4.2, #2 of this section, i.e. free of all serious hazards.

Note: Permit-required and “other” confined spaces will be entered following Title 8 CCR 5157 confined space entry requirements, as incorporated in Section 5.0 of this procedure.

Policy – Lone workers shall have a reliable means of communication. Supervisors shall be aware of employees by checking every 15 minutes.

Examples of restricted access areas include unfinished basements, inhabitable building spaces that are interstitial, and mezzanines.

4.3 Department Confined Space Inventory

1. **Refer to Attachment A** for CSU, Chico **Confined Space Inventory Listing** of identified and evaluated spaces.
2. **Refer to Attachment B** for completed **Confined Space Classification Worksheets**.
3. The basis for **Confined Space Classification or Reclassification** must be documented (i.e. permit-required; spaces eligible for entry under alternate procedures; and the reclassification of permit-required spaces as “non-permit” spaces. **Refer to Attachment C** (Safety Checklists), and Attachment D, Reclassification Form and Reclassification Certification.

4.4 Department of Environmental Health and Safety

1. Shall assist in identifying any and all operations potentially involving confined space entry.
2. Shall assist in the evaluation and determine the classification of the confined spaces.

4.5 Departments

1. Shall assist in identifying any and all operations potentially involving confined space entry.
2. Shall assist in the evaluation and determine the classification of the confined spaces.
3. Shall ensure that a warning sign or label is attached to the entry points of all known confined spaces and maintain a current inventory list of known confined space locations.
 - a. All Permit to Enter confined spaces shall be posted with a sign or label similar to the following:

**DANGER
PERMIT REQUIRED CONFINED SPACE
DO NOT ENTER**

4. Shall ensure that only trained personnel are assigned to confined space operations.
5. Shall ensure that the employees assigned to each operation involving confined space entry follow all aspects of this procedure prior to entry into the space.
6. Shall ensure that a **Confined Space Entry Permit Tracking Log (refer to Attachment F)** is maintained to document the issuance, cancellation, and recordkeeping of all issued Confined Space Entry Permits.
 - a. All issued permits shall be noted in the log at the time of issuance.
 - b. Permit numbers shall be the date (month/date/year) of the operation. Should multiple permits be issues on the same date, permit numbers will include (a), (b), (c), as needed.
 - c. At the completion of work or when entry operations are terminated, the permit shall be canceled, and the date of cancellation and the name of the person canceling the permit shall be noted in the log.
 - d. Canceled permits shall remain in the log for at least one year and be reviewed during the annual program re-evaluation.
7. Shall review the job requirements and approve (or disallow) the planned operation.

ENTRY PROCEDURES FOR PERMIT REQUIRED CONFINED SPACES AND OTHER CONFINED SPACES

5.0

5.1 General Requirements

1. Permit-required confined space entries performed by CSU, Chico employees require the use of a Confined Space Entry Permit, issued by the Department, prior to the space being entered.
2. All confined spaces must be opened in a manner that will preclude worker injury. Examples of precautions to be taken include, but are not limited to:
 - a. Standing upwind to prevent exposure to transient vapors.
 - b. Using the correct tools for removing lids and vault covers.
 - c. Wearing the appropriate PPE to prevent head, eye, hand, and foot, injuries.
 - d. Remaining cognizant of negative and/or positive pressure build-up behind confined space closures (e.g., vaults, flanges, and previously sealed plates).
 - e. Immediately providing for the protection of pedestrians, workers, and vehicles if the opened confined space poses a hazard to those in proximity.
 - f. Taking measures to ensure that pipelines are clear before disconnections and using secondary containment when disconnecting pipelines to capture small leaks.
 - g. Using equipment to move heavy objects; employing the buddy system and/or proper lifting techniques when moving objects that can be safely moved by individuals.
 - h. Use the appropriate safety checklist(s) in Attachment C.
3. The internal atmosphere of all confined spaces must be tested prior to entry, and at regular intervals throughout the duration of the job being performed pursuant to 6 and 7, as listed below, of this procedure to ensure safe entry conditions. Pre-entry testing may be witnessed by employees or their authorized representatives. Any results obtained as well as any certification made as a consequence of those results shall be made available to the employee or their authorized representatives. Reevaluation of spaces if requested, may be witnessed by the employee or their authorized representatives.
4. All permit OSHA required (and other) confined spaces must be ventilated prior and during the entire job.
5. The unique hazards associated with a given confined space operation (e.g. falling objects, noise pedestrians, poor lighting, and traffic) must be assessed and controlled prior to work commencement and during work until completion.

6. Confined space workers must also constantly be aware of the various sources of air contamination and oxygen depletion, which include, but are not limited to:
 - a. Natural gas leaks, fuel-saturated soil, and sewer gas production (these can be sources of elevated LELs, methane, and/or H₂S);
 - b. Rust (the oxygen involved in the formation of iron oxide is often taken from the atmosphere found inside of an iron vessel);
 - c. Chemical and/or vapor migration into the confined space from:
 - Decomposing biological matter (such as algae, sewage, and dead animals).
 - The internal or external use of paints, cleaning agents, and (other) chemicals used around or brought into the confined space;
 - Vehicle exhausts and fires;
 - Welding fumes.
7. Rescue procedures must be in place before entry into a permit-required confined space can occur.

5.2 Responsibilities:

Performing work in permit-required confined spaces involves the support of an Entry Supervisor, Attendant (at least one), Entrant(s) and a Rescue Service⁵. These roles, with the exception of rescue services, are transferrable during the course of a confined space operation, provided that the individual fulfilling the role(s) is “trained and equipped” to competently serve in the assigned capacity and, where multiple job duties have been assigned, one does not detract from the other.

5.3 Entry Supervisor Duties:

- a. Identifies the scope of work to be performed in the space and assesses the associated hazards.
- b. Obtains work authorization from the Department and a blank confined space permit.
- c. Enters the name of the representative authorizing the work onto the Confined Space Permit.
- d. Completes the Confined Space Entry Permit *and* the appropriate Confined Space Classification Worksheet prior to allowing entry into the space or delegates this duty to a trained designee (e.g., the Attendant).
- e. Reviews the appropriate safety checklist (Attachment C)
- f. Ensures that air monitoring equipment is available, calibrated, and ready for use.
- g. Ensures that the confined space is properly isolated⁶, monitored, and ventilated prior to entry.
- h. Ensures that emergency procedures are established prior to work commencement (i.e. verifies, where applicable, that the designated rescue service has resources available and will be on stand-by; and ensures that the methods used for summoning the service are functional).

⁵ CSU, Chico employees are not authorized to perform “entry rescues.” If non-entry rescue cannot be achieved, Chico Fire Department will be notified prior to work commencement and immediately contacted during emergencies.

⁶ Some confined spaces, such as sewers, cannot be effectively isolated. See Section 5.3.2, *Attendants Duties*, for entry requirements involving spaces that cannot be isolated.

- i. Establishes acceptable entry conditions pursuant to Section 7.1, *Acceptable Entry Conditions* and ensures that such conditions exist prior to and during entry into permit-required confined spaces.
- j. Ensures that all participants have received training commensurate with their job duties.
- k. Reviews the Entry Permit for completeness and accuracy.
- l. Validates the Entry Permit (with his or her signature), only when all pre-entry requirements, as specified in this procedure, have been met.
- m. Ensures that the content of the Entry Permit is discussed with all workers during a site specific safety meeting before work begins.
- n. Ensures that the signed Entry Permit and Confined Space Classification Worksheet is posted near the entrance of the space, or makes the Permit, otherwise, accessible by other effective means.
- o. Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
- p. Terminates entry when the work is completed or immediately, upon the discovery of a condition that could negatively impact worker safety.
- q. Remains at the location of the confined space for the duration of the work or, prior to departure, transfers supervision to another on-site worker, trained to function in the capacity of "Entry Supervisor." Any change in oversight of the confined space operation must be noted on the Entry Permit⁷.
- r. Maintains verbal or radio communication with the attendant at all times during the entry (if not also functioning as an entrant or attendant).

5.3.1 Attendant Duties:

- a. Knows the hazards (including signs and symptoms of exposure) associated with the confined space entry operation.
- b. Understands how to assemble and use job-related equipment (e.g. ventilation systems, air monitoring equipment, PPE, lighting, barriers, shields, ladders, and emergency retrieval systems).
- c. Tests the atmosphere for oxygen content, LEL, carbon monoxide, hydrogen sulfide, and any other contaminant that can be reasonably expected to be present in the space. Air monitoring must occur prior to and regularly during entry, at frequencies that will ensure worker safety.
 - In areas that cannot be isolated, such as sewer systems, continuous monitoring must occur.

Note: Air monitoring can be performed by any trained CSU, Chico confined space worker, as authorized by the Entry Supervisor.

- d. Continuously maintains awareness of authorized entrant(s) activities (including maintaining an accurate count and identity of all entrants).
- e. Remains outside of the permit-required confined space until relieved by another authorized attendant.

⁷ This requirement can be achieved by listing multiple job duties when completing the permit (e.g., "John Doe: Attendant and Entry Supervisor").

- f. Communicates with authorized entrants and monitors their activities.
- g. Monitors activities and working conditions in and around the space, ensuring that acceptable entry conditions are maintained pursuant to Section 7.1 *Acceptable Entry Conditions*.
- h. Alerts the authorized entrants to exit the space under any of the following circumstances:
 - The attendant detects a prohibited condition;
 - The attendant detects the behavioral effects of hazardous exposure in an entrant;
 - The attendant detects a situation outside the space that could endanger the authorized entrants;
 - The attendant cannot effectively and safely perform all the duties required of an attendant.
- i. Summons rescue and emergency services, if authorized entrants need assistance to escape from any confined space hazards.
- j. Warns and prevents unauthorized entry into confined space (notifies the Entry Supervisor in such cases).
- k. Performs non-entry rescues, as necessary, utilizing extraction equipment (i.e., retrieval system).
- l. Never monitors multiple spaces simultaneously until such time as written communication and emergency procedures are developed and incorporated into this confined space program⁸.
- m. Never performs duties that may interfere with the primary and required duties of an attendant for confined space operations.

5.3.2 Entrant Duties

- a. Is knowledgeable of the hazards in the confined space, including:
 - Mode of exposure;
 - Signs and symptoms of exposure; and
 - Consequences of exposure.
- b. Properly uses the required safety equipment.
- c. Communicates with the attendant as necessary to enable the attendant to monitor the entrant's status and enable the attendant to alert the entrants.
- d. Alerts the attendant whenever:
 - The entrant recognizes any warning signs or symptoms of exposure to a dangerous situation; or
 - The entrant detects a prohibited condition.

⁸ CSU, Chico currently does not have written procedures enabling a single attendant to monitor multiple spaces.

e. Immediately exits the space whenever:

- Ordered to evacuate by the attendant and/or entry supervisor;
- The entrant recognizes warning signs or symptoms of exposure to a dangerous situation;
- A prohibited condition is detected; or
- An evacuation alarm is activated.

6.0**RESCUE SERVICES**

California State University, Chico employees are not to perform confined space entry rescues.

6.1 General Requirements

- a. Prior to entry into a permit to enter confined space, the Entry Supervisor will ensure that the Chico Fire Department is notified *in advance* by calling Police/Fire Dispatch at (530) 897-4900. The following information is to be provided:
 - Date and time of entry.
 - Location of confined space.
 - Expected duration of work.
- b. The notification is documented on the Permit in the section referring to “Stand by Safety Personnel”.
- c. The Attendant must be prepared at all times to provide assistance in the event of an emergency including attempting non-entry rescue and calling for help.
- d. At a minimum, the following emergency equipment must be staged at the confined space or be immediately available. Additional equipment may be required and shall be specified by the Entry Supervisor and/or the Department of Environmental Health and Safety or other department.
 - Emergency communication equipment (e.g. radio, telephone, signaling device).
 - First aid kit.
- e. The Entry Supervisor shall remain available for verbal communication from the attendant during the course of the confined space entry.
- f. In the event of an emergency, the attendant must immediately notify the Entry Supervisor after calling 911.

6.2 Non-Entry Rescue

- a. Wherever feasible, non-entry rescue is the primary method for retrieving CSU, Chico +*workers from confined spaces during emergencies. If the worker is alert and capable of safely exiting the space during an emergency, then self-rescue is the method of choice.

If the worker will need assistance exiting the space, a retrieval system designed to safely remove workers (e.g., tripod, top-entry retrieval device) shall be utilized.

- b. Retrieval systems shall meet the following requirements (8 CCR 5157 (k)(3)(A&B)):
 - *Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at a suitable point so that when rescued, the entrant presents the smallest possible profile (for example at the center of the entrant's back near shoulder level, or above the entrant's head). Wristlets may be used in lieu of the*

chest of 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 deep.*

Note: While utilizing fall protection, employees need to follow CSU, Chico's Fall Protection Program.

Note: Retrieval systems can only be used where mechanically feasible and when the retrieval equipment would not increase the overall risk of injury.

6.3 Entry Rescue

- a. Entry rescue shall only be performed by the Chico Fire Department.
- b. Chico Fire Department shall be notified of the need for rescue by calling 911.
- c. When calling for help the Attendant or Entry Supervisor shall give the following information:
 - Caller's name.
 - Address and exact location of the confined space.
 - Nature of the emergency (very brief).
 - Workers affected
 - Hazards
 - Events leading to emergency
 - Call back and/or contact information
- d. When emergency personnel arrive on-scene the Entry Supervisor and/or Attendant shall:
 - Update the rescue personnel.
 - Assist as needed.

7.0**ENTRY CONDITIONS****7.1 Acceptable Entry Conditions**

Only confined spaces that meet all of the following conditions are considered acceptable for CSU, Chico confined space-trained workers to enter.

1. The oxygen concentration is above 19.5 percent and below 23.5 percent.
2. Minimal detectable flammable gases or vapors (i.e., less than 10% LEL.)
3. All chemical contaminants are at or below their respective PEL's, or other published exposure limits (if PEL's have not been established.)
4. The space can be safely entered without the use of respiratory protection.
5. The space has been isolated from all external and internal hazards (such as product lines, energized equipment, hot steam lines, and moving parts) and/or all of the identified hazards have been, otherwise, effectively controlled to the satisfaction of the supervisor/manager.

7.2 Conditions Prohibiting Entry – Applies to all Spaces

1. The Confined Space Tracking Log is incomplete (Attachment F.)
2. A Confined Space Entry Permit and/or Confined Space Classification Worksheet (where applicable) have not been initiated or have not been validated by an entry supervisor's signature. (Attachments E and B respectively.)
3. The appropriate safety checklist has not been reviewed (Attachment C.)
4. Atmosphere of the confined space has not been tested.
5. Rescue procedures have not been established.
6. Any condition exists that does not conform to Section 7.1 "*Acceptable Entry Conditions*".

8.0**NON-PERMIT CONFINED SPACE ENTRY PROCEDURES****8.1 General Requirements:**

To ensure the safety of those slated for work within non-permit spaces, (such as crawl and drop ceiling spaces) the following precautions must be taken:

1. Notify the Department or supervisor of your intent to enter a non-permit space. Provide the location and type of space (also provide the space number, if assigned); scope of work and projected job duration.
2. Employ the “buddy system⁹” (at least two workers must be present during non-permit confined space entries).
 - a. Each worker shall have a reliable means of communication when not in-direct-line-of-sight with each other.
 - b. When workers are not in-direct-line-of-sight, a verbal check-in is required every 15-minutes.
3. Open all confined spaces in a manner that will preclude worker injury. Examples of precautions to be taken include, but are not limited to:
 - a. Standing upwind to prevent exposure to transient vapors.
 - b. Using the correct tools for removing lids and vault covers.
 - c. Wearing the appropriate PPE to prevent head, eye, hand, and foot, injuries.
 - d. Remaining cognizant of negative and/or positive pressure build-up behind confined space closures (e.g., vaults, flanges, and previously sealed plates).
 - e. Using equipment to move heavy objects; employing the buddy system and/or proper lifting techniques when moving objects that can be safely moved by individuals.
4. Periodic testing shall be performed to ensure conditions have not changed per 6 and 7 listed below to ensure safe entry conditions. **THE RESULTS OF THE ATMOSPHERIC TESTS MUST BE DOCUMENTED.**
5. Identify and control the unique hazards associated with the confined space operation (e.g. falling objects, noise, pedestrians, poor lighting, and traffic) prior to work commencement.
6. Be aware of the various sources of air contamination and oxygen depletion, which include, but are not limited to:
 - a. Natural gas leaks, fuel-saturated soil, and sewer gas production (these can be sources of elevated LELs, methane, and/or H₂S);
 - b. Rust (the oxygen involved in the formation of iron oxide is often taken from the atmosphere found inside of an iron vessel);

⁹ This is a CSU, Chico Policy.

- c. Chemical and/or vapor migration into the confined space from:
- Decomposing biological matter (such as algae, sewage, and dead animals).
 - The internal or external use of paints, cleaning agents, and (other) chemicals used around or brought into the confined space;
 - Vehicle exhausts and fires;
 - Welding fumes.
7. Immediately exit the space, upon the discovery of any condition that would jeopardize the safety of the entrants or would render the confined space “permit-required.”

Note: Work being performed in or around a “non-permit” confined space could render the space “permit-required.” therefore, those working in non-permit confined spaces must remain aware of changing conditions occurring in and around the space and immediately exit the space when unsafe conditions develop.

8.2 Reclassification of a Permit-Required Confined Space:

Reclassification of a permit-required confined space cannot occur without written concurrence from the Director of the CSU, Chico Department of Environmental Health and Safety.

A permit-required confined space may be reclassified as a “non-permit” space and, therefore, be entered following the requirements contained in Section 8.0 of this procedure, if all of the hazards causing the space to require a permit have been eliminated.

The reclassification must be documented using the forms in Attachment D. The process shall also be performed in accordance with Safety Checklist No. 3, Attachment C.

Note: Control of an atmospheric hazard through forced air ventilation does **not** constitute elimination of the hazard.

If the confined space must be entered to eliminate the hazards, the entry requirements contained in Section 5.0, *Permit-Required Confined Space Entry Procedures*, apply (which includes Section 7.1, *Acceptable Entry Conditions*).

9.0

RESTRICTED ACCESS AREAS

9.1 General Requirements

Restricted access areas are not confined spaces, but given the complexity of their configuration and/or location, warrant that special precautions be taken prior to entering and performing work¹⁰.

When work is to be performed in restricted access areas (such as unfinished basements, poorly lit tunnels, and inhabitable interstitial spaces), CSU, Chico personnel shall do the following:

- a. Notify their manager or supervisor of intent to enter a restricted access space. Provide the location and type of space; scope of work and projected job duration.
- b. Establish a radio point-of-contact who is not a co-occupant of the space (e.g., co-worker, Department representative).
- c. Report your location and status every 15 to 30 minutes to the designated point-of-contact.
- d. In the event of a failure to “call-in” on the part of the worker located within the restricted access area, the designated point-of-contact must pursue means of locating the worker (e.g., calling the department supervisor responsible for the work; calling the facility where the work is being performed; and/or initiating on or offsite emergency procedures).

Note: The Department of Environmental Health and Safety, Manager, and Supervisor may at his/her discretion require the “Buddy System” to be utilized while work occurs in any CSU, Chico, restricted area. Reference Section 8.1.2 of this Program.

¹⁰ Some restricted access areas are so located that if a worker were suffering a sudden medical emergency (e.g., a heart attack), a substantial amount of time could pass before the victim is discovered.

10.0**TRAINING**

Applies to all spaces:

1. Employees who will participate in permit-required and “other” confined space operations must first receive Permit-Required Confined Space/Other Confined Space training (e.g., entry supervisors, attendants, entrants, and EHS representatives responsible for Confined Space Program oversight).
2. Training shall be updated whenever there is a change in entry procedures, new hazards have been identified, or if inadequacies are found in an employee’s knowledge, work practices, or compliance with these procedures.
3. Training shall establish proficiency by use of one or more of the following:
 - a. Completion of a written examination, and/or;
 - b. Completion and review of training exercises which may include demonstration of the proper use of test instruments, personal protective clothing and equipment, lifelines and harnesses, retrieval devices, and other related equipment items.
4. The Manager of each department shall certify that the training requirements, listed below, have been satisfied by any department employee participating in confined space activities. The training must be documented and a copy provided to the Department of Environmental Health and Safety. The training certification document must include the following:
 - a. Employee name.
 - b. Date of training.
 - c. Name (and initials or signature) of the trainer.
5. Training shall include the following items:
 - a. Hazards of confined space operations.
 - b. Signs and symptoms of exposure to hazards.
 - c. Differences between non-permit and permit-required confined space; re-classified spaces; permit required spaces that may be entered following alternate procedures; other confined spaces, and restricted access spaces.
 - d. The content of this Program.
 - e. The Cal/OSHA permit-required confined space and other Confined Space standards.
 - f. Use of the confined-space entry permit and Confined Space Classification Worksheet.
 - g. Conditions prohibiting safe entry.
 - h. Duties of the Entry Supervisor, Attendant, and Authorized Entrant.
 - i. Use of test instruments, retrieval line, harness, extraction device and personal protective clothing and equipment.
 - j. Emergency and rescue procedures.
6. The Department of Environmental Health and Safety shall maintain all employee training records. Training records shall be maintained for three years.

11.0

CONTRACTOR ENTRY INTO CONFINED SPACES

Applies to all spaces:

11.1 Contractor Confined Space Entry

1. The University shall require that any contractor who may enter a confined space as part of contracted work has implemented a written permit-required confined space program.
2. The Department of Environmental Health and Safety or contracting department shall review the contractor's confined space procedures for correctness and applicability to the work to be performed at CSU, Chico.
3. The contractor shall be informed of the hazards, configuration, and entry requirements for the confined spaces(s) to be entered.
4. The Department of Environmental Health and Safety and/or contracting department shall advise the contractor of any site-specific procedures needed for protecting employees in or near the spaces.

11.2 Joint Department and Contractors Entry into Confined Spaces

In the event of joint CSU, Chico and contractor conditions:

1. The Department of Environmental Health and Safety or contracting department shall coordinate entry operations for the space so as not to endanger any exposed employees and to ensure that all applicable confined space requirements are met.
2. All items listed in Section 11.1, *Contractor Entry into Confined Spaces*, shall be satisfied.

12.0**PROGRAM EVALUATION****12.1 General Requirements**

1. The Confined Space Safety Program (i.e., this procedure) shall be re-evaluated annually by the California State University, Chico's designee with the Department of Environmental Health and Safety.
2. Annual re-evaluation shall, at a minimum include a review of the following records:
 - a. Canceled Confined Space Entry Permits for the previous 12 months.
 - b. Confined space classifications.
 - c. Training records.
 - d. Any known and/or documented confined space safety incidents.
 - e. Air monitoring instrumentation, retrieval systems, and other safety equipment condition, usage, and maintenance.

12.2 Responsibilities

1. Each department on campus that has employees involved in this Confined Space Program needs to provide the following list of equipment free of charge to employees, maintain that equipment and ensure that employees use that equipment properly.
 - a. Air testing and monitoring equipment
 - b. Ventilating equipment
 - c. Communication equipment
 - d. Personal Protective Equipment (PPE)
 - e. Lighting equipment that is safe for the conditions
 - f. Barriers and shields for pedestrian and vehicle traffic to protect entrants
 - g. Ladders and other equipment to enable safe entry and exit from confined spaces
2. The Department of Environmental Health and Safety shall be responsible for initiating and documenting the annual program review.
3. The Director of the Department of Environmental Health and Safety, Department Managers, and Entry Supervisors shall participate in each annual review.

12.3 Revisions

1. Revisions to written procedures, training, confined space inventories, the Permit-Required Confined Space Entry Permit, air testing and safety equipment, etc., shall be implemented and documented when warranted by program re-evaluation.
2. All CSU, Chico confined space-trained employees shall be informed of and trained on all program revisions.

13.0

ATTACHMENTS

- A. CSU, Chico Confined Space Inventory
- B. Classification Worksheet (Pending and Completed)
- C. Safety Checklists (1, 2, and 3)
- D. Space Alternate Procedures Reclassification and Reclassification Certification
- E. Entry Permit
- F. Entry Permit Tracking Log
- G. Ventilation Guidelines
- H. Classification Worksheet (Form)
- I. Evaluation Flowchart

Attachment A

California State University, Chico
Confined Space Inventory

California State University, Chico Confined Space Inventory

Electrical Manholes & Vaults/Permit Required
Current Listing—February 2014*

SPACE LOCATION	SPACE NAME
Walkway at the East Side of Glenn Hall	#E-13 Low Voltage
South Side of the Siskiyou Bridge	#E-MH15 High Voltage
South Side of the Siskiyou Bridge	#E-15 Low Voltage
South Side of the Meriam Library #16	#E-MH21 High Voltage
South Side of the Meriam Library #16	#E-21 Low Voltage
North Side of the Meriam Library #16	#E-23 Low Voltage
North Side of the Meriam Library #16	#E-23a Low Voltage
North Side of Holt Hall	#E-MH24.35 High Voltage
Walkway of the Holt Hall	#E-24.35 Low Voltage
North Side Bell Memorial Union	#E-MH25 High Voltage
North Side Bell Memorial Union	#E-25 Low Voltage
Southeast Corner of Shurmer Gymnasium	#E-26-27-27a-28
West Side South Corner of Langdon Hall	#E-27b
Northwest Corner Performing Arts Center	#E-29 High Voltage
Northwest Corner Performing Arts Center	#E-29 Low Voltage
South of Plumas Hall, North Side of Siskiyou Bridge	#E-MH29.12 High Voltage
South of Plumas Hall, North Side of Siskiyou Bridge	#E-MH29.12 Low Voltage
East Side of Siskiyou Hall	#E-MH30 High Voltage
East Side of Siskiyou Hall Bldg. #14	#E-30 Low Voltage
Front of Tehama Hall	#EMH-31 High Voltage
Front of Tehama Hall	#E-31 Low Voltage
Near Deli South Side of Colusa Hall	#E-31.25 High Voltage
Near Deli South Side of Colusa Hall	#E-31.25 Low Voltage
North Side of Butte Hall	#E-MH32 High Voltage
North Side of Butte Hall	#E-32 Low Voltage
North Side of Holt Hall	#E-MH34.22 High Voltage
North Side of Holt Hall	#E-34.22 Low Voltage
North Side of Deli, Colusa Hall Parking Lot	#E-35 Low Voltage
West of Physical Sciences Building	#E-MH37.47 High Voltage
West of Physical Sciences Building	#E-37.47 Low Voltage
Northwest Corner of Taylor Hall	#E-MH37 High Voltage
Northwest Corner of Taylor Hall	#E-37 Low Voltage
North Side of Kendall Hall	#E-MH39 High Voltage
North Side of Kendall Hall	#E-39 Low Voltage
Southeast Corner of Modoc Hall	#E-MH40 High Voltage
East Side of Modoc Hall	#E-MH41 High Voltage
North Side of Glenn Hall	#E-51 Low Voltage

*This list is not all inclusive; additional spaces will be added as they are identified.

California State University, Chico Confined Space Inventory

Steam Manholes & Vaults/Permit Required

Current Listing—February 2014*

SPACE LOCATION	SPACE NAME
East Side of Meriam Library	#S-1
Southeast Corner of Meriam Library	#S-2
South Side of Meriam Library	#S-3
Southwest Corner of Meriam Library	#S-4
Warner and W. First Street at Bus Stop	#S-5
Shurmer Gymnasium Field	#S-6
South End at Shurmer Gymnasium Field	#S-6A
Southeast Corner of Shurmer Gymnasium	#S-7
South Side Plumas Hall	#S-8
Southeast Corner Plumas Hall	#S-9
Northeast Tehama Hall	#S-10
North Side of Butte Hall	#S-11
Near Satellite Dish at Siskiyou Hall	#S-12
Northeast Side of Siskiyou Hall	#S-13
South Side at Glenn Hall	#S-14
North Side Kendal Hall	#S-15
North Side at Holt Hall	#S-16
North Side of Education Psychology Bldg. Modoc Hall	#S-17
West Side at Modoc Hall	#S-18
East Side of Holt Hall	#S-19
North Side, Chico Creek Footbridge, North of Holt Hall	#S-20
South Side at Glenn Hall	#S-21
North Side of Physical Science Building	#S-22
North Side of Ayres Hall	#S-23
South Side of Chico Creek Walking Bridge	#S-26
North Side of Chico Creek Bridge	#S-27
West Side of Taylor Hall	#S-28
South Side of Kendal Hall	#S-29
North Side of Laxson Auditorium	#S-30
North of Laxson Auditorium	#S-31
North Side of Kendal Hall	#S-32
West Side at Modoc Hall	#S-33
West Side at Langdon Hall	#S-35

*This list is not all inclusive; additional spaces will be added as they are identified.

**California State University, Chico
Confined Space Inventory**

Sewer Manholes / Permit Required

Current Listing-February 2014*

Southwest of Butte Hall, lawn area near Pump House	SS #1
South of Plumas Hall near walkway	SS #2
Southwest of Plumas Hall, north of Foot Bridge	SS #3
West of Plumas Hall, sidewalk near entrance to Courtyard	SS #4
Southwest of Siskiyou Hall near sidewalk	SS #5
Southwest of Siskiyou Hall, between bike parking at Meriam Library	SS #6
North of Meriam Library, towards AD on green lawn	SS #7
North of Meriam Library, towards AD on green lawn	SS #8
Southwest of Center for Continuing Education	SS #9
South of Glenn Hall, west of entrance by Glenn Lawn	SS #10
BMU, Loading Dock area	SS #11
Student Services Center, southwest corner	SS #12
South entrance Hazel Street, BMU at Student Services Center	SS #13
South entrance Hazel Street, BMU at Student Services Center	SS #14
Northwest corner, 3 rd and Orange Parking Lot "AK"	SS #15
Walkway between BMU and Performing Art Center	SS #16
Walkway between BMU and Performing Art Center	SS #17
Southwest corner of Kendall Hall	SS #18
Southeast corner of Selvester's Café	SS #19
Northwest corner of Kendall Hall	SS #20
Southeast corner of Selvester's Café	SS #21
Northeast corner of Kendall Hall	SS #22
South of main entrance of Kendall Hall	SS #23
Southwest Kendall Lawn near CSU Monument Sign	SS #24
East section of Kendall Lawn	SS #25
Northeast of Performing Art Center (walkway)	SS #26
East of Albert E. Warrens Recreation Center	SS #27
Southeast corner of Modoc Hall	SS #28
Southwest of Modoc Hall near sidewalk	SS #29
West front of Modoc Hall	SS #30
South entrance of Aymer J. Hamilton Circle Lot "C"	SS #31
Northwest corner of Aymer J. Hamilton Building #2	SS #32
Northeast of Ayers Hall at south end of Physical Science	SS #33
Southwest corner of Laxson Auditorium	SS #34
South of Laxson Auditorium at Ayers Hall	SS #35
Southeast of Ayers Hall near Parking	SS #36
Southeast at front of Ayers Hall near Foundry	SS #37

Confined Space Program

Rear lawn area of Aymer J. Hamilton (closet to Gateway Science Museum)	SS #38
Rear lawn area of Aymer J. Hamilton (closet to Gateway Science Museum)	SS #39
North Konkow Hall near West Sacramento (in planter)	SS #40
Northeast of Konkow Hall at sidewalk by Key Shop	SS #41
East of Mechoopda Hall in Parking Lot	SS #42
East of Esken Hall, corner of Parking Lot	SS #43
South of Esken Hall, near Housing Maintenance Shop	SS #44
South of Esken Hall, near Housing Maintenance Shop	SS #45
North end of Stadium Parking Lot "A"	SS #46
Northwest of Nettleton Concessions	SS #47
College Drive at entrance to Stadium Lot "A"	SS #48
College Drive across from Student Health Center Parking Lot	SS #49
East of Sutter Hall (Fire Lane)	SS #50
East of Sutter Hall (Fire Lane)	SS #51
East of Sutter Hall (Fire Lane)	SS #52
Student Health Center Parking Lot near Stadium Gate	SS #53
University Stadium, northeast by Track	SS #54
University Stadium, west side, north of Restroom	SS #55
University Stadium, west side of Grounds Shed	SS #56
University Stadium, in Field southwest of Access Road	SS #57
North of Yolo Hall, Lot "W"	SS #58

*This list is not all inclusive; additional spaces will be added as they are identified.

**California State University, Chico
Confined Space Inventory**

Telecommunication Manholes & Vaults/Permit Required

Current Listing-February 2014*

SPACE LOCATION	SPACE NAME
Yolo Hall- East Side of BCP (Field near Fence)	#T-2
Putting Green, North at Ivy Street	#T-6
East Side Shurmer Gymnasium	#T-8
East Side Acker Gymnasium	#T-10
North of Bridge, Southeast of Plumas Hall	#T-12
Southeast corner of Tehama Hall	#T-14
North Side of Satellite Compound	#T-15
South End Butte Hall, North of Pump House	#T-16
North of Butte Hall	#T-18
Corner of Citrus Ave, in front of Julia Morgan House	#T-20
Alfred E. Warren House, West Mansion Avenue	#T-22
North Side of Holt Hall	#T-24
Front of Modoc Hall, North of Butte Hall	#T-26
North Side of Creek near Foot Bridge	#T-28
South Putting Green at Yolo Hall	#T-34
Northeast of Kendall Hall	#T-39
East of Plumas Hall	#T-52
Between Lassen and Tehama Hall	#T-80
Between Butte & Tehama Hall	#T-82

*This list is not all inclusive; additional spaces will be added as they are identified.

California State University, Chico
Confined Space Inventory

Other Spaces

Current Listing-February 2014*

SPACE LOCATION	SPACE NAME	TYPE OF SPACE
Trinity Hall	Attic Space Trinity Hall	Restricted Access
Trinity Hall	Interspatial between Floors	Restricted Access
Kendall Hall	Attic Space in Provost Building	Restricted Access
Various Locations	Air Conditioner	Restricted Access

*This list is not all inclusive; additional spaces will be added as they are identified.

**California State University, Chico
Confined Space Inventory**

**AGRICULTURAL RESEARCH AND TRAINING CENTER
(UNIVERSITY FARM)**

Silos, Sewer Access Manholes, Water Tank, Pump Station, and Irrigation Facility
PERMIT REQUIRED

Current Listing – February 2014*

SPACE LOCATION	SPACE NAME
Middle of University Farm property	F- 1 Chicago Silo
Next to Chicago Silo	F-2 Small Silo (Tan)
Adjacent to the Dairy Unit	F-3 "Chico State" Silo
Near swine barns and other locations- refer to farm map	F-4 Various Silos
Various locations- refer to farm map	F-5 Sewer Manholes
Center of University farm	F-6 Large Water tank (White)
Northwest of main office, south of Swine Unit along East/West farm road.	F-7 Pump Station
Southwest quadrant of farm off of main access road beyond Greenhouse	F-8 Irrigation Training Facility

*This list is not all inclusive; additional spaces will be added as they are identified.

Attachment B

California State University, Chico

Confined Space Classification Worksheets
(Pending and Completed)

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Electrical Manholes/Vaults

SPACE LOCATION: Various Locations

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>	
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>)	
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>)	
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
		Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)	
		Space not regulated by OSHA _____	
HAZARDS	Chemical: _____		
	Physical: _____		
	Other: _____		
COMMENTS	_____		

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Steam Manholes/Vaults

SPACE LOCATION: Various Locations

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>		
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>		
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: _____		
	Physical: _____			
	Other: _____			
COMMENTS				

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Telecom Manholes/Vaults

SPACE LOCATION: Various Locations

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>		
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>		
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: _____		
	Physical: _____			
	Other: _____			
COMMENTS				

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Sewer Manholes and Vaults

SPACE LOCATION: Various Locations

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>	
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>	
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>	
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
		Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)	
		Space not regulated by OSHA _____	
HAZARDS	Chemical: _____		
	Physical: _____		
	Other: _____		
COMMENTS	_____		

CLASSIFIED BY: _____

DATE: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Valve Control Vaults

SPACE LOCATION: Various Locations

CLASSIFICATION		Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>	
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>	
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>	
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
	X	Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)	
		Space not regulated by OSHA _____	
HAZARDS	Chemical: _____		
	Physical: _____		
	Other: _____		
COMMENTS	_____		

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Basement Crawl Spaces

SPACE LOCATION: Various Locations

CLASSIFICATION		Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5)) <i>Use Safety Checklist No. 2</i>		
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7)) <i>Use Safety Checklist No. 3</i>		
		Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
	X	Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: _____ Physical: _____ Other: _____		
COMMENT	Restricted Access			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: Attic Spaces

SPACE LOCATION: Various Locations

CLASSIFICATION		Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>		
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>		
		Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
	X	Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: _____ Physical: _____ Other: _____		
COMMENTS				
	Restricted Access			

CLASSIFIED BY: _____

DATE: _____

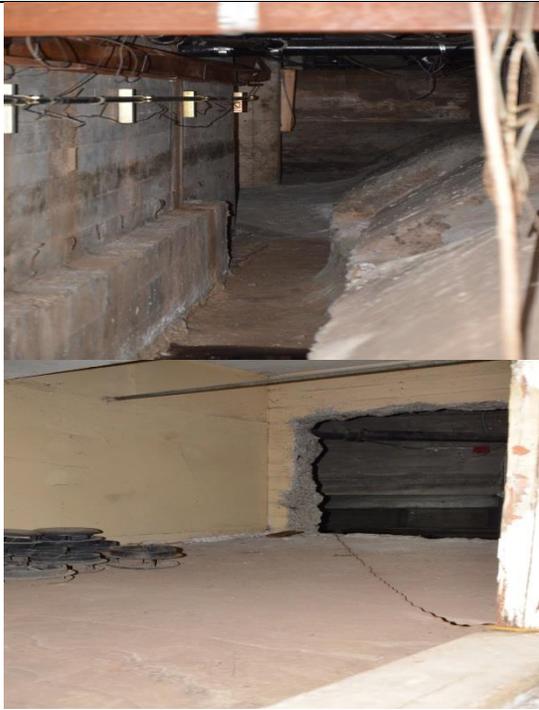
Confined Space Classification Worksheet

DEPARTMENT: FMS

FACILITY LOCATION: Kendall Hall

SPACE NAME: Basement "Non-crawl space"

SPACE LOCATION: Kendall Hall & Locations

CLASSIFICATION	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
	Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>		
	Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>		
	Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
	<input checked="" type="checkbox"/> Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
	Space not regulated by OSHA _____		
	HAZARDS		
	Chemical: _____		
Physical: _____			
Other: _____			
COMMENTS	_____		

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: _____

SPACE LOCATION: _____

CLASSIFICATION		Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>		
		Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>		
		Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>		
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
	<input checked="" type="checkbox"/>	Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)		
		Space not regulated by OSHA _____		
	HAZARDS	Chemical: _____		
		Physical: _____		
		Other: _____		
COMMENTS	_____			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: FMS

FACILITY LOCATION: _____

SPACE NAME: Space Behind Air-Conditioner

SPACE LOCATION: Multiple Locations

CLASSIFICATION	Permit-required confined space (8CCR 5157) <i>Use Safety Checklist No. 1</i>	
	Permit required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>	
	Permit required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>	
	Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
	<input checked="" type="checkbox"/> Non-Permit Space (not regulated by OSHA unless conditions change which re-classify the space)	
	Space not regulated by OSHA _____	

HAZARDS	Chemical: _____	
	Physical: _____	
	Other: _____	
COMMENTS	_____	

CLASSIFIED BY: _____

DATE: _____

California State University, Chico

Agricultural Teaching and Research Center
University Farm

Confined Space Classification Worksheets
(Completed)

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center

FACILITY LOCATION: University Farm

SPACE NAME: Various Silos

SPACE LOCATION: See Farm Map

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>		
	<input type="checkbox"/>	Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5)) Use <i>Safety Checklist No. 2</i>		
	<input type="checkbox"/>	Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7)) Use <i>Safety Checklist No. 3</i>		
	<input type="checkbox"/>	Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
	<input type="checkbox"/>	Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space)		
	<input type="checkbox"/>	Space not regulated by OSHA _____		
	HAZARDS			
	<input type="checkbox"/>	Chemical: _____		
<input type="checkbox"/>	Physical: Limited air return, electrocution, bodily injury from mechanical equipment if not locked out.			
<input type="checkbox"/>	Procedure: LOCK OUT and tag all electrical and mechanical components prior and during Entry operations.			
COMMENTS	Various smaller Silos are located throughout the farm, with the main group of 10 near the Swine Unit Barns. Each Silo has its own unique hazard(s) which requires that each has its own hazard evaluations performed prior to entry.			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center

FACILITY LOCATION: University Farm

SPACE NAME: Irrigation Training Facility

SPACE LOCATION: See Farm Map

CLASSIFICATION	X	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) Use <i>Safety Checklist No. 2</i>
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) Use <i>Safety Checklist No. 3</i>
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space
		Space not regulated by OSHA





HAZARDS	Chemical: None at this time.
	Physical: Electrocution, drowning and insect bites/stings
	Procedure: _____
COMMENTS	The Irrigation Training Facility is an outdoor education laboratory environment designed to teach and practice various irrigation techniques. The main reservoir is 9.5 ft. by 22 ft. and 13 feet deep above the grates when full.

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center FACILITY LOCATION: University Farm

SPACE NAME: Chicago Silo

SPACE LOCATION: See Farm Map

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>	 	
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) Use <i>Safety Checklist No. 2</i>		
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) Use <i>Safety Checklist No. 3</i>		
		Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space		
		Space not regulated by OSHA _____		
	HAZARDS	Chemical: None known at this time		
		Physical: Deficient oxygen/ limited air return, electrocution, bodily injury from mechanical equipment if not locked out.		
		Procedure: _____		
COMMENTS	LOCK OUT and tag all electrical and mechanical components prior to and during entry operations.			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center FACILITY LOCATION: University Farm

SPACE NAME: Main Large Water Tank (White) SPACE LOCATION: See Farm Map

CLASSIFICATION	X	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>	 	
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5)) Use <i>Safety Checklist No. 2</i>		
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7)) Use <i>Safety Checklist No. 3</i>		
		Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: <u>None know at this time</u>		
		Physical: _____		
	Procedure: _____			
COMMENTS				
The large white water tank is the only large water tank on the University Farm property. This Tank is 32 feet tall and has one 28.5" circular access hole at ground level. THIS TANK IS NOT INTENDED TO BE ENTERED BY UNIVERSITY PERSONNEL.				

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center FACILITY LOCATION: University Farm

SPACE NAME: "Chico State" Silo

SPACE LOCATION: See Farm Map

CLASSIFICATIONS	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>		
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) Use <i>Safety Checklist No. 2</i>		
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) Use <i>Safety Checklist No. 3</i>		
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space		
		Space not regulated by OSHA _____		
	HAZARDS	Chemical: Off gassing of silo contents requires constant purging and continuous air monitoring		
		Physical: Limited air return		
Procedure: _____				
COMMENTS	<p>This Silo is the tallest Silo at the farm at 40 feet on height. The Silo has one 2 foot square access hole.</p> <p>NOTE: THIS SILO IS NO LONGER IN USE</p>			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center FACILITY LOCATION: University Farm

SPACE NAME: Pump Station

SPACE LOCATION: See Farm Map

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>		
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5)) Use <i>Safety Checklist No. 2</i>		
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7)) Use <i>Safety Checklist No. 3</i>		
		Other confined space operation—Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space)		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: None known at this time		
		Physical: Drowning, asphyxiation due to inadequate air return, pipe rupture injuries, electrocution, and insect bites/stings.		
	Procedure: _____			
COMMENTS				
	The Pump Station is located NW of the main office, south of the Swine Unit. The pump station moves water from pit to pit. There are two 30" square access grates into a manhole containing water, water pipes, and electrical lines. One of the access grates is almost completely covered by equipment and is not readily accessible.			

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center FACILITY LOCATION: University Farm

SPACE NAME: Small Tan Silo

SPACE LOCATION: See Farm Map

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>	
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) Use <i>Safety Checklist No. 2</i>	
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) Use <i>Safety Checklist No. 3</i>	
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space)	
		Space not regulated by OSHA _____	
HAZARDS	Chemical: None known at this time.		
	Physical: Limited air return, electrocution, bodily injury, from mechanical equipment if not locked out.		
	Procedure: _____		
COMMENTS	LOCK OUT and tag all electrical and mechanical components prior to and during entry operations. This silo is approximately 15' tall and has one 32" x 64" access hatch on the side. It is located next to the larger Chicago Silo.		

CLASSIFIED BY: _____

DATE: _____

Confined Space Classification Worksheet

DEPARTMENT: Agricultural Teaching & Research Center

FACILITY LOCATION: University Farm

SPACE NAME: Sewer Manholes

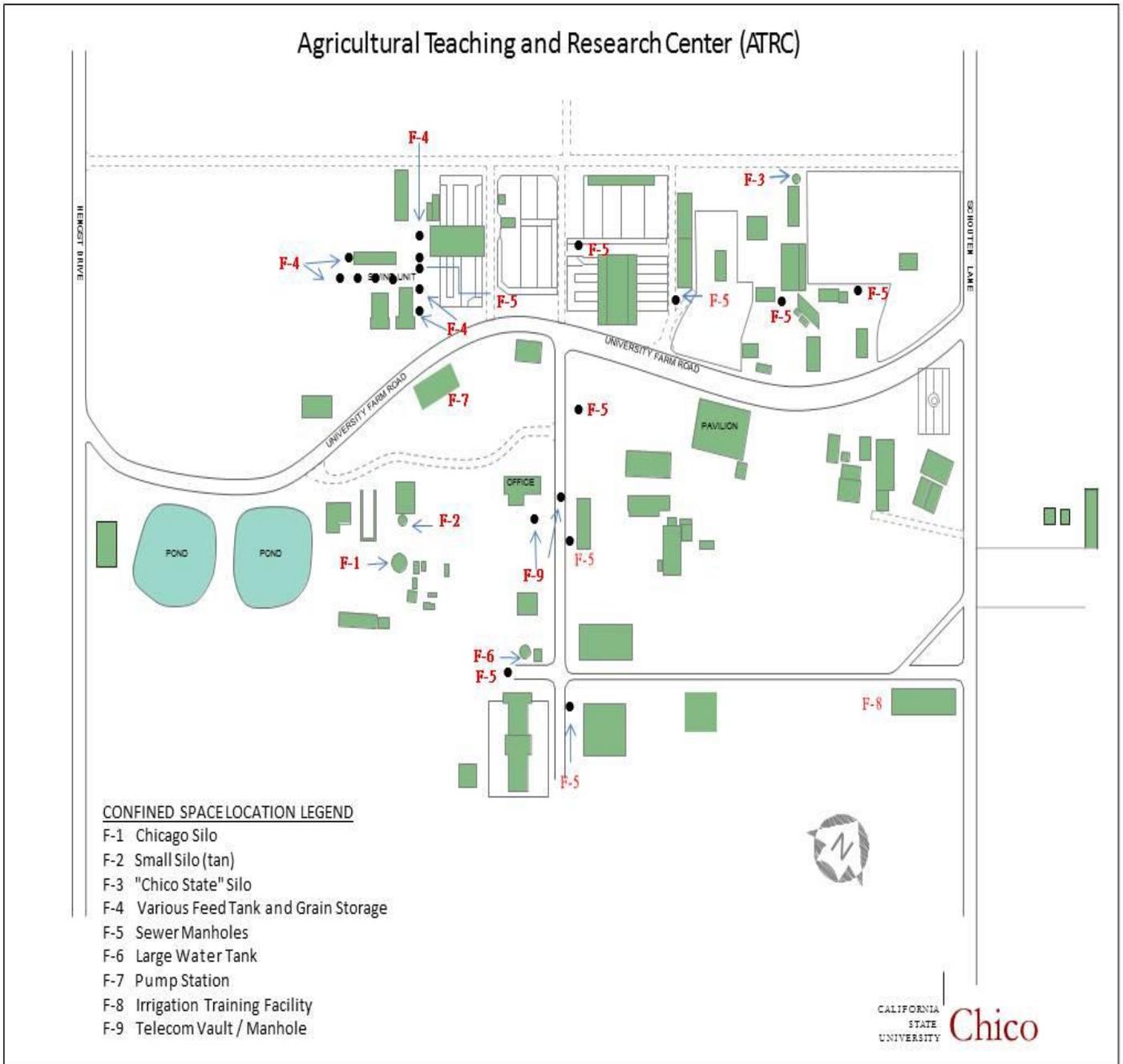
SPACE LOCATION: See Farm Map

CLASSIFICATION	<input checked="" type="checkbox"/>	Permit-required confined space (8 CCR 5157) Use <i>Safety Checklist No. 1</i>		
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) Use <i>Safety Checklist No. 2</i>		
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) Use <i>Safety Checklist No. 3</i>		
		Other confined space operation-Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)		
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space		
		Space not regulated by OSHA _____		
	HAZARDS			
		Chemical: _____		
	Physical: _____			
	Procedure: _____			
COMMENTS				
Multiple sewer manholes are located throughout the farm. Each space varies in depth and has potential for multiple hazards. Each space must have its own unique hazards evaluated prior to entry.				

CLASSIFIED BY: _____

DATE: _____

ATRC- UNIVERSITY FARM MAP OF CONFINED SPACES



Attachment C

Confined Space Safety Checklists

California State University, Chico
CONFINED SPACE SAFETY CHECKLIST No. 1

Permit-Required Confined Space [8 CCR 5157]

- ___ All entries must meet the general requirements of the standard.
- ___ A written permit-required confined space program must be implemented.
- ___ A permit system must be in use for all entries.
- ___ A written entry permit must be documented for all entries.
- ___ All affected employees must receive initial, change of duty, change in operations, and as needed updated training.
- ___ Training must be specific for entrant, attendant, and entry supervisor duties and responsibilities.
- ___ A complete, written rescue and emergency services plan must be implemented for all entries. Local first responders notified of entry, well in advance.
- ___ The clearance procedure must be completed.
- ___ The space must be ventilated.
- ___ The atmosphere must be tested.
- ___ The entry supervisor must determine if/when it is safe to enter the space.
- ___ Appropriate personal protective equipment must be worn.
- ___ Entrant and attendant duties must be assigned.
- ___ Lifeline and full body harness shall be worn.
- ___ Ventilators and lighting are approved for hazardous atmospheres.

California State University, Chico

CONFINED SPACE SAFETY CHECKLIST No. 2

Permit-Required Confined Space—Entry Allowed Using Alternative Procedures [8 CCR 5157 (c)(5)]

_____ Alternate Procedures for Entry maybe Utilized Providing the following:

- The only demonstrated hazard posed by the space is an actual or potential hazardous atmosphere.
- It can be demonstrated that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry.
- Monitoring and inspection data has been developed that supports the demonstration that forced air ventilation alone is sufficient to maintain the permit space safe for entry.
- If an initial entry into the space is necessary to obtain the data required to demonstrate that forced air ventilation alone is sufficient to maintain the permit space safe for entry, then the initial entry must comply with all Permit-Required Confined Space regulations including use of an entry permit system and implementation of rescue and emergency procedures.

_____ Any condition making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.

_____ The opening shall be promptly guarded to protect accidental fall through and to protect employees in the space from falling/entering foreign objects.

_____ Before entry, the atmosphere in the space must be tested with a calibrated direct-reading instrument for Oxygen content, flammable gases & vapors, and potential toxic air contaminants in that specific order.

_____ Must wear a harness.

_____ No hazardous atmospheres may exist whenever employees are inside the space.

- Continuous forced air ventilation shall be used.
- Entry shall not be allowed until ventilation has eliminated the hazardous atmosphere.
- Ventilation shall be directed to ventilate the immediate area where employees will be present in the space.
- Ventilation shall be continuous until the employees leave the space.
- Ventilation air shall be from a clean source.

_____ The atmosphere shall be periodically tested to ensure that the ventilation is preventing the accumulation of a hazardous atmosphere.

_____ If a hazardous atmosphere is detected:

- Employees shall leave immediately.
- The space shall be evaluated to determine how the hazardous atmosphere developed.
- Employees shall be protected for the hazardous atmosphere before any re-entry is permitted.
- The space entered under these provisions shall be verified through a written certification that all pre-entry requirements have been satisfied and that the space is safe for entry.
 - The certification must contain the date, location, and the signature of the person making the certification.
 - The certification must be made before entry and must be available to employees entering the space.

California State University, Chico

Confined Space Safety Checklist No. 3

Permit-Required Confined Space—Reclassified to Non-Permit Required Space [8 CCR 5157 (c)(7)]

_____ A permit-required confined space may be reclassified as a non-permit-required confined space for as long as the atmospheric hazard remains eliminated provided the following:

- The permit space poses no actual or potential atmospheric hazard.
- All hazards in the space are eliminated without entry into the space.
- Forced air ventilation is not required to control/eliminate any atmospheric hazard.

_____ Entry into the space to eliminate any hazards must comply with the full Permit-Required Confined Space Standard, including use of an entry permit system, and implementation of rescue and emergency procedures.

- If during entry and inspection, it is demonstrated that the hazards within the permit space may be reclassified as non-permit-required confined space for as long as the hazards remain eliminated.

_____ The basis for determining that all hazards in the permit space have been eliminated must be documented through a certification.

- The certification must contain the date, location of space, and the signature of the person making the certification.
- The certification must be available to the employees entering the space.

_____ Must wear a harness.

_____ If the hazards arise in a space declassified to non-permit-required, employees shall immediately exit the space.

- The space shall be re-evaluated to determine if it must be reclassified as a permit-required confined space.

Attachment D

**Confined Space Alternate
Procedures/Reclassification Form**

And

Reclassification Certification

Confined Space Alternate Procedures / Reclassification Form

Department Information

Department: _____

Department Manager/Supervisor: _____

Telephone: _____

Confined Space Description

Confined Space Name: _____

Space Location: _____

Space Description: _____

Alternate Procedure Determination

Complete this section for Permit-Required Confined Spaces to be entered following the **alternate procedures** specified in 8 CCR 5157(c)(5)

1. The only hazard posed by the permit space is an actual or potential hazardous atmosphere. Yes No

Document that the only actual or potential hazard is atmospheric hazards (i.e., no other hazards).

2. Demonstrate that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry. Document monitoring dates.

Date: _____

Conditions: _____

Atmosphere Test Results: _____

3. Document inspection data that supports that the only actual or potential hazard is atmospheric hazards which can be controlled through continuous forced air ventilation alone.

Date: _____

Inspection Findings: _____

Reclassification Certification

Complete this section for Permit-Required Confined Spaced reclassified to Non-Permit Required.

1. Describe how all hazards have been **eliminated** from the space. _____

2. Determination that all hazards have been eliminated from the space (e.g., inspection, testing, etc.)

This certifies that the space has been reclassified to a non-permit-required confined space. This reclassification is temporary (expires: _____)/permanent.

EHS must be notified in writing. Forward this form with written notification.

Department Manager

Date

Attachment E

Confined Space

Entry Permit

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California State University, Chico

Confined Space Entry Permit (SAMPLE)

(Actual permit is a two-part form)

CSU, Chico Confined Space Entry Permit		Permit Number: _____ - _____ - _____																																																																																																																																																																																				
COMPANY/LOCATION _____		DEPARTMENT: _____ DATE: _____																																																																																																																																																																																				
CONFINED SPACE TO BE ENTERED: _____		PERMIT EXPIRATION DATE/TIME: _____																																																																																																																																																																																				
DESCRIPTION OF WORK TO BE PERFORMED: _____																																																																																																																																																																																						
NATURE OF HAZARDS IN CONFINED SPACE: (check) <input type="checkbox"/> Oxygen deficiency (Less than 19.5% at sea level) <input type="checkbox"/> Flammable gases or vapors (greater than 10% of the lower flammable limit, or greater than 23.5% oxygen at sea level) <input type="checkbox"/> Toxic gases or vapors (greater than the permissible exposure limit) <input type="checkbox"/> Mechanical hazards <input type="checkbox"/> Electrical shock <input type="checkbox"/> Materials harmful to the skin <input type="checkbox"/> Engulfment <input type="checkbox"/> Configuration hazard <input type="checkbox"/> Other _____		EQUIPMENT REQUIRED FOR ENTRY AND WORK: (check) <input type="checkbox"/> Respirator <input type="checkbox"/> Lifeline and safety harness <input type="checkbox"/> Protective clothing <input type="checkbox"/> Hearing protection <input type="checkbox"/> Other _____ Electrical equipment/tools: <input type="checkbox"/> Low voltage <input type="checkbox"/> Ground-fault current interrupters <input type="checkbox"/> Approved for hazardous locations Respiratory protection (specify) _____ Communication aid (specify) _____ Rescue equipment (specify) _____																																																																																																																																																																																				
PREPARATION: (check) <input type="checkbox"/> Notify affected departments of service interruption <input type="checkbox"/> Isolate - blanked or double valve, with lock and tag <input type="checkbox"/> Zero energy state (Lock Out all energy sources) <input type="checkbox"/> Cleaned, drained, washed and purged <input type="checkbox"/> Ventilation to provide fresh air <input type="checkbox"/> Emergency response team available <input type="checkbox"/> Employees informed of specific confined space hazards <input type="checkbox"/> Secure area (post, sign and flag) <input type="checkbox"/> Procedures reviewed with each employee <input type="checkbox"/> Atmospheric test in compliance <input type="checkbox"/> Attach hot work permit <input type="checkbox"/> Other _____		AUTHORIZED ENTRANTS: _____ _____ _____ _____ _____ AUTHORIZED ATTENDANTS: _____ _____ _____ _____ STAND BY SAFETY PERSONNEL: _____ _____																																																																																																																																																																																				
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Attachment F

Confined Space
Entry Permit Tracking Log

Attachment G

Confined Space Ventilation Guidelines

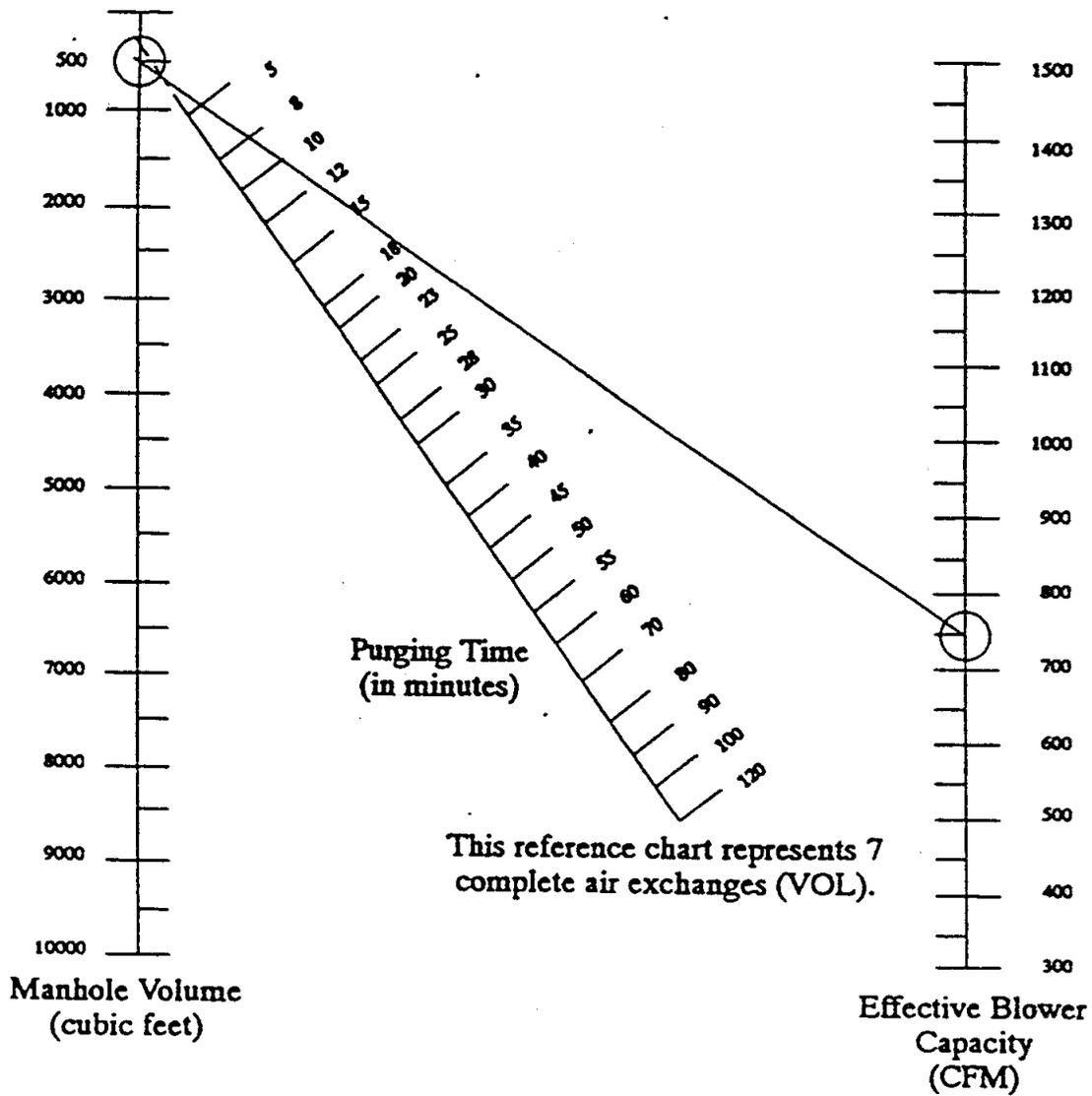
CONFINED SPACE VENTILATION GUIDELINES

1. Blowers are used to purge hazardous atmospheres. Blowers must be intrinsically safe. They have an effective capacity in CFM (cubic feet per minute). Purge times are influenced by;
 - a. The capacity of the blower.
 - b. The amount of contamination of the air in the space and the rate at which the contaminants are being released into (or produced in) the space.
 - c. The volume of the space.
 - d. The number of bends in the ventilator hose.
2. While purging, the dropped end of the hose should:
 - a. Hang vertically.
 - b. Not be more than two feet above the floor.
3. When using a blower, make sure that:
 - a. The blower intake is away from traffic to avoid vehicle exhaust fumes.
 - b. If the blower is gas-powered, the motor exhaust is not being sucked into the air intake.
4. Another good proactive is to point the blower hose at a wall of the space. This will create air currents that may help disperse pockets of gas.
5. Use of nomograph: To estimate initial ventilation period before testing (i.e., purging).
 - a. Place straightedge on vault volume (left scale). Place other end of straightedge on blower capacity (right edge). Read required purging time, in minutes, on diagonal scale.
 - b. 8' x 9' x 7' deep vault; 750 CFM blower.
Vault volume = 8 x 9 x 7 = 504 cubic feet.
 - c. From chart, purging time is less than five minutes.
6. Use of a formula to estimate initial ventilation period before testing (i.e., testing).

Formula for Time to Purge =

$$\frac{L \times W \times D \times 7 \text{ Air Changes}}{\text{CFM of Blower}}$$

- a. If two blowers are used, add the two capacities, then proceed as above.
- b. When toxic gases are encountered, increase purging time by 50 percent.
- c. Effective blower capacity is measured with one or two 90° bends in standard 15-foot blower hose.



Effective Blower Capacity (CFM)	Conventional Vault (1,000-10,000 cubic feet)	Offset Access Vault (with permanent ventilating duct)	Deep Neck Vault		Irregular Shape Vault	
			Permanent Ventilating Duct	Coupled Hose	Uncongested	Congested
One 90° bend						
Two 90° bends						

Use blower capacity with two 90° bends unless blower has been certified with coupled hose with one 90° bend.

Attachment H

Confined Space

Classification Worksheet

(Blank Form- use for newly identified confined spaces)

Confined Space Classification Worksheet

DEPARTMENT: _____

FACILITY LOCATION: _____

SPACE NAME: _____

SPACE LOCATION: _____

CLASSIFICATION		Permit-required confined space (8 CCR 5157) <i>Use Safety Checklist No. 1</i>	
		Permit-required confined space—entry allowed using alternate procedures (8 CCR 5157(c)(5) <i>Use Safety Checklist No. 2</i>	
		Permit-required confined space— reclassified to non-permit required space (8 CCR 5157(c)(7) <i>Use Safety Checklist No. 3</i>	
		Other confined space operation - Use Safety Checklist No. 1 or No. 2, depending on air test results (see below)	
		Non-Permit Space (not regulated by OSHA unless conditions change which reclassify the space)	
		Space not regulated by OSHA _____	
HAZARDS		Chemical: _____	
		Physical: _____	
		Procedure: _____	
COMMENTS		_____	

CLASSIFIED BY: _____

DATE: _____

Attachment I

Confined Space Evaluation Flowchart

CONFINED SPACE EVALUATION FLOWCHART

A guide for determining whether individual spaces meet the OSHA criteria for confined space, permit-required, alternate procedures, or non-permit confined space

