Purpose

The purpose of this program is to ensure the safety of all employees and contractors working for SESAC, and to comply with all federal and state requirements that pertain to confined spaces.

Scope

This program covers all employees and other workers that may be involved in confined space entry. This document covers SESAC employees and contractors and shall be used on construction sites when a Controlling Contractor's program doesn't exist or is less stringent.

Definitions

Acceptable entry conditions: means the conditions that must exist in a permit space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, the space.

Attendant: means an individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform the duties specified in § 1926.1209.

Authorized entrant: means an employee who is authorized by the entry supervisor to enter a permit space.

Barrier: means a physical obstruction that blocks or limits access.

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

Competent person: means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Confined Space

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

(Examples of locations where confined spaces may occur include, but are not limited to, the following: Bins; boilers; pits (such as elevator, escalator, pump, valve or other equipment); manholes (such as sewer, storm drain, electrical, communication, or other utility); tanks (such as fuel, chemical, water, or other liquid, solid or gas); incinerators; scrubbers; concrete pier columns; sewers; transformer vaults; heating, ventilation, and air-conditioning (HVAC) ducts;

storm drains; water mains; precast concrete and other pre-formed manhole units; drilled shafts; enclosed beams; vessels; digesters; lift stations; cesspools; silos; air receivers; sludge gates; air preheaters; step up transformers; turbines; chillers; bag houses; and/or mixers/reactors.)

Control: means the action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by ventilation), and then using these methods to maintain the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.

Controlling Contractor: is the employer that has overall responsibility for construction at the worksite. (If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer.)

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

Early-warning system: means the method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to: Alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.

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

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

Entry: means the action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.

Entry Employer: means any employer who decides that an employee it directs will enter a permit space. (An employer cannot avoid the duties of the standard merely by refusing to decide whether its employees will enter a permit space, and OSHA will consider the failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.)

Entry permit (permit): means the written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in § 1926.1206.

Entry rescue: occurs when a rescue service enters a permit space to rescue one or more employees.

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

Hazard: means a physical hazard or hazardous atmosphere. See definitions below.

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

1. Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
2. Airborne combustible dust at a concentration that meets or exceeds its LFL; (This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less.)
3. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
4. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in subpart D of this part (Occupational Health and Environmental Control), or in subpart Z of this part (Toxic and Hazardous Substances), and which could result in employee exposure in excess of its dose or permissible exposure limit; (An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition.)
5. Any other atmospheric condition that is immediately dangerous to life or health. (For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, § 1926.59, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.)

Host employer: means the employer that owns or manages the property where the construction work is taking place. (If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in § 1926.1203(h)(1), OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.)

Hot work: means operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).

Immediately dangerous to life or health (IDLH): means any condition that would interfere with an individual's ability to escape unaided from a permit space and that poses a threat to life or that would cause irreversible adverse health effects. (Some materials-hydrogen fluoride gas and cadmium vapor, for example-may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.)

Inerting: means displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. (This procedure produces an IDLH oxygen deficient atmosphere.)

Isolate or isolation: means the process by which employees in a confined space are completely protected against the release of energy and material into the space, and contact with a physical hazard, by such means as: Blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.

Limited or restricted: means for entry or exit means a condition that has a potential to impede an employee's movement into or out of a confined space. Such conditions include, but are not limited to, trip hazards, poor illumination, slippery floors, inclining surfaces and ladders.

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

Lockout: means the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lower flammable limit or lower explosive limit: means the minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.

Monitor or monitoring: means the process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

Non-entry rescue: occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.

Non-permit confined space: means a confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space, as defined in this subpart.

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

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

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

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

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

Physical hazard: means an existing or potential hazard that can cause death or serious physical damage. Examples include, but are not limited to: Explosives (as defined by paragraph (n) of § 1926.914, definition of "explosive"); mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces. Physical hazard also includes chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).

Prohibited condition: means any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.

Qualified person: means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Representative permit space: means a mock-up of a confined space that has entrance openings that are similar to, and is of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.

Rescue: means retrieving, and providing medical assistance to, one or more employees who are in a permit space.

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

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

Serious physical damage: means an impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.

Tagout means:

1. Placement of a tagout device on a circuit or equipment that has been deenergized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed; and
2. The employer ensures that:
    i. Tagout provides equivalent protection to lockout; or
    ii. That lockout is infeasible and the employer has relieved, disconnected, restrained and otherwise rendered safe stored (residual) energy.

Test or testing: means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. (Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.)

Ventilate or ventilation: means controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of § 1926.57 (Ventilation).

Responsibilities

Controlling Contractor

The controlling contractor is the primary point of contact for information about permit spaces at the worksite. The controlling contractor is responsible for ensuring employers outside a space know not to create hazards in the space and that entry employers working in a space at the same time do not create hazards for another's workers.

Host Employer

The host employer must provide information about permit spaces at the worksite to the controlling contractor, who must then pass this information on to any employers whose employees will be entering the spaces (entry employers).

Entry Employer

Entry employers must give the controlling contractor information about their entry program and any hazards they may encounter in the space. The controlling contractor will then pass the information on to the host and other entry employers.

A site evaluation and identification of confined spaces must be conducted before work begins. A Competent Person (someone qualified to identify hazards and authorized to correct them promptly) must evaluate the worksite and identify confined spaces, including permit spaces.

Managers/Supervisor

- Shall ensure that all employees have been trained and fully understand the requirements of this program.
- Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained on its use.
- Shall ensure that all confined space assessments have been conducted and documented.
- Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers and by use of the pre-entry checklist verifying that conditions in the permit space are acceptable for entry during its duration.
- Shall ensure that all Permit-Required Confined Spaces permits are posted.
- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.
- Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER- DO NOT ENTER”.
- Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIANT, FLAMMABILITY or TOXIC HAZARD”
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

Affected Employee

- Shall attend Confined Space Entry training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any SESAC employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

Authorized Entry Supervisor Duties

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form, and have it accessible for review on the job site at all times.
- Shall notify SESAC' supervisor of entry into a confined space, and notify the supervisor of any changes that may occur, during an entry.
- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.
- If the confined space poses no hazards to the Entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

Authorized Attendant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
- Continuously maintains communication and an accurate count of authorized Entrants in the confined space and ensures that the means used to identify authorized Entrants, and accurately identifies who is in the confined space.
- Remains outside the confined space during entry operations until relieved by another Attendant.
- Attendants are NOT allowed to monitor more than one confined space.
- Note: Attendants may enter a confined space to attempt a rescue, if they have been trained and equipped for rescue operations as required and only when they have been relieved by another authorized Attendant.
- Monitors activities inside and outside the confined space to determine if it is safe for Entrants to remain in the space and orders the authorized Entrants to evacuate the confined space immediately under any of the following conditions:
    - If the Attendant detects a prohibited condition;
    - If the Attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
    - If the Attendant detects a situation outside the space that could endanger the authorized Entrants;
    - If the Attendant cannot effectively and safely perform all the duties required.
- Summon rescue and other emergency services as soon as the Attendant determines that authorized Entrants may need assistance to escape from confined space hazards.

- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
    - Warn the unauthorized persons that they must stay away from the confined space;
    - Advise the unauthorized persons to exit the confined space immediately, if they have entered the space;
    - Inform the authorized Entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the authorized Entrants.
- Authorized Attendants shall not monitor more than one confined space at a time.

Authorized Entrant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves aprons, coveralls, and breathing equipment;
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants;
- Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.
- Is entitled to request additional monitoring at any time.
- Maintain communication with the Attendants to enable the Attendant to monitor the Entrants status as well as to alert the Entrant to evacuate if needed; and
- Exit from confined spaces as soon as possible when ordered by an Attendant or Entry Supervisor, when the Entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists, or when an alarm is activated.

Procedure

Each employer with employees who may work in confined spaces must use a Competent Person to identify all confined spaces and permit required confined spaces. A danger sign must be posted at each permit required confined space and the Controlling Contractor must be notified of the location of each permit required confined space. If employees are not authorized to work in a permit required confined space, steps must be taken to prevent them from entering. If employees are authorized to enter a permit required confined space, then this program must be implemented.

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for confined space entry.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Atmospheric monitoring must be continuous unless equipment for continuous monitoring is not commercially available. If continuous monitoring is not used, periodic monitoring is required.
- Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O2, and toxicity hazards remain at safe levels.

- Complete the SESAC Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.
- A trained Attendant must always be outside the confined space. The Attendant must monitor the authorized Entrants for the duration of the entry operation.

Exception: The Attendant requirements for confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

- This provision is intended to permit field operations to enter Bins; boilers; pits (; manholes; tanks; incinerators; scrubbers; concrete pier columns; sewers; transformer vaults; heating, ventilation, and air-conditioning (HVAC) ducts; storm drains; water mains; precast concrete and other pre-formed manhole units; drilled shafts; enclosed beams; vessels; digesters; lift stations; cesspools; silos; air receivers; sludge gates; air preheaters; step up transformers; turbines; chillers; bag houses; and/or mixers/reactors., etc. without an Attendant being present and all other aspects of the entry permit complied with.
- When there are changes in the use and configuration of a confined space that might increase the hazards to the Entrants (e.g., using epoxy coating on a tank floor, welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.
- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the SESAC Confined Space Entry Permit before allowing Entrants to re-enter the space.
- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

Permit-Required Confined Space Entry

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the SESAC Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.
- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Atmospheric monitoring must be continuous unless equipment for continuous monitoring is not commercially available. If continuous monitoring is not used, periodic monitoring is required.
- Entrants shall review and sign the confined space permit.
- At least one trained Attendant must always be outside the Permit-Required Confined Space.
- The Attendant must monitor the authorized Entrants for the duration of the entry operation.
- Only authorized Entrants may enter a Permit-Required Confined Space.
- All Entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
- Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.
- Conditions must be continuously monitored where Entrants are working to determine that acceptable conditions are maintained during entry.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
    - The Entry Supervisor shall suspend the entry permit.
    - Re-evaluate the space to determine how the hazardous atmosphere developed.
    - Take action to protect personnel before any subsequent activity to re-enter the space takes place.
    - Reinstate the SESAC Confined Space Entry Permit before allowing Entrants to re-enter the space.
    - Employees or their representatives are entitled to request additional monitoring at any time.
- The permit must be suspended or terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).
- The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue & Emergency section of this program.
- Permit-Required Confined Space entry operations will be reviewed when SESAC believes that the requirements of this confined space program may not adequately protect personnel.
- If deficiencies are found in the program, the program will be revised and personnel will be trained in the new revisions before subsequent entries are authorized.

Pre-Job Planning and Space Preparation
The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all Entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Ensure engulfment hazards are isolated or continuously monitored.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized Entrants.

If performing hot work in the confined space, precautions must be taken consistent with the SESAC Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

Pre-Entry Safety Meeting
The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized Entrant(s) and Attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company's work does not endanger the employees of another company.

Equipment
Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that Entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:

- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and

unauthorized entry is prohibited. Any signs used must state “Danger – Permit Entry Confined Space” along with the proper warning word such as “Asphyxiant, Flammability or Toxic Hazard”. All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.

- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the Attendant in constant, direct communication with the Entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency service.
- Entry and Exit Equipment – (For example: ladders may be needed for safe entry and exit).
- Lighting Equipment – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.
- Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels) must be operated at 12 volts or less. 120 volt lights may be used if protected by a ground-fault circuit interrupter.
- Personal Protective Equipment – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the Respiratory Protection Program.
- Rescue and Emergency Equipment – Except if provided by outside rescue services.
- The Attendants must also have an approved first aid kit.
- Vacuum Trucks – When used, trucks must be properly grounded or bonded to prevent static sparks.
- Ventilating Equipment – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).
- Other – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Air Monitoring

- Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Monitoring of the space must inform the entrants of the potential hazards and results and they must participate in the permit review and signing.
- Air shall be continuously tested while continuous ventilation is applied.
- Any employee, who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by this paragraph.
- Employees or their representatives are entitled to request additional air monitoring at any time.

Ventilation

Continuous forced air ventilation must be used and tested as follows:

- An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;

- The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;
- The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
- The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing and may request additional monitoring at any time.
- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

Multiple Employer Procedure
In order not to endanger the employees of any other employer, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand the SESAC procedures pertaining to Confined Space.
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.
- Apprise the contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.
- Inform the contractor of any precautions or procedures that SESAC has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
- Coordinate entry operations with the contractor, when both SESAC' personnel and contractor personnel will be working in or near confined spaces.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- In addition to complying with the confined space requirements that apply to all employees; each contractor, who is retained to perform permit space entry operations, shall:

    - Obtain any available information regarding confined space hazards and entry operations from the SESAC Entry Supervisor.
    - Coordinate entry operations with the SESAC Entry Supervisor, when both SESAC' personnel and contractor personnel will be working in or near permit spaces.
    - Inform SESAC of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

Rescue and Emergency Services

Where ever possible, the use of non-entry rescue systems or methods shall be used.

Where non-entry rescue is not possible SESAC Members will coordinate rescue and emergency services with designated providers. The rescuer service(s) will be invited to the jobsite and made aware of the hazards they may confront when called on to perform rescues. The rescuers shall be responsible to equip, train, and conduct rescue. The Competent Person or Entry Supervisor will provide the rescue service with access to all permit spaces from which rescue may be necessary so that they can develop appropriate rescue plans and practice rescue operations.

Non-Entry Rescue

- Non-entry rescue is the preferred method for rescue of employee(s) from a permit-required confined space. Employees shall not enter a permit space to attempt rescue unless they have been specifically trained and equipped for confined space rescue operations.
- To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.
- Non-entry rescue retrieval systems shall meet the following requirements:

    1) Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level or other appropriate attachment point.
    2) The other end of the retrieval line shall be attached to a mechanical retrieval system 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.
    3) The entry supervisor will designate and confirm, prior to entry, that emergency assistance would be available in the event non-entry rescue fails.
    4) Contact information for emergency rescue services shall be listed on the confined space permit.
    5) If the injured entrant is exposed to any substance with a required SDS or similar document, that SDS or document will be made available to the medical provider treating the entrant(s).

- If rescue becomes necessary, the entry supervisor or attendant shall:
    1) Notify and summon the rescues team/service
    2) Attempt non-entry rescue procedures utilizing the mechanical retrieval system
    3) Continue to ventilate the confined space
    4) Monitor the situation and be prepared to provide the rescuers with the following information:
        a. Number of victims
        b. The status of victims
        c. The time the incident occurred
        d. Existing or potential hazards
        e. Gas monitor readings

f. What the victim was doing
g. Names of chemicals that were being used
h. Other applicable information

Local or Contracted Rescue Service

When non-entry rescue methods are infeasible or inappropriate for the confined space due to the number of entrants, type of work task, space configuration, or other limiting or restricting situations, the safety department will designate and arrange for rescue and emergency services. Prior to beginning entry operations the safety department shall:

1) Invite the rescue service to the jobsite and provide the prospective rescue team access to the confined space from which rescue may be necessary
2) Inform the prospective rescue service of the potential hazards
3) Evaluate the rescuer services ability to respond to a rescue summons in a timely manner
4) Evaluate the rescue services ability to perform confined space rescue
5) Evaluate the rescue services capability to respond in a timely manner
6) Determine if the rescue service is equipped to perform a rescue
7) Determine if the rescue service will notify the entry supervisor when unavailable to perform rescue

In-House Rescue Service

If it is determined by the safety department that (company name) must provide an in-house rescue service, employees will be selected and trained by the safety department. Participation on a in-house rescue team is strictly voluntary and no employee will be selected unless he/she is willing to participate. Employees who do participate will:

1) Be trained to perform assigned rescue duties
2) Be trained in first aid and CPR
3) Be provided with the appropriate safety and personal protective equipment necessary to conduct rescue safely
4) Be required to practice rescue at least annually from confined spaces similar to spaces from which rescue may have to be performed.

Alternate Procedures Confined Space

Every confined space is considered to be a permit-required confined space until it is reclassified by the Competent Person or Entry Supervisor. Prior to reclassifying a confined space, the hazards must be evaluated and the atmosphere within the space must be tested with a gas monitor by the Competent Person or Entry Supervisor. Before a space can be reclassified and downgraded to an alternate procedure or non-permit confined space, it must comply with the following:

Reclassification to an Alternative Procedure Confined Space

Employees who enter a confined space need not comply with the permit-required confined space procedures set forth in the permit-required confined space entry program provided that:

a. It can be demonstrated that all physical hazards in the space are eliminated or isolated through engineering controls so the only hazard posed by the permit space is an actual or potential hazardous atmosphere.
b. It can be demonstrated that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry and that, in the event the ventilation stops working, entrants can exit the space safely.
c. Monitoring and inspection data are developed that support the previous conclusions.
d. If an initial entry of the permit space is necessary to obtain the data required, the entry is performed according to the procedures set forth in this document concerning entry into a permit-required confined space.
e. The determinations and supporting data required are documented and certified by the Entry Supervisor including the date, location and supervisor's name and signature.

Employees who enter into confined spaces using the alternative entry methods must implement and comply with the alternative entry procedures established by this Confined Space Entry Program.

The alternative entry certification (see attached Confined Space Entry Checklist) shall be made available for review by each employee who enters the space.

Alternative Entry Procedures

The following requirements apply to entry into permit spaces that meet the conditions set forth in the requirements for Reclassification to Alternate Entry.

- Any condition making it unsafe to remove the entrance cover must be eliminated before the cover is removed
- The opening to the confined space must be immediately guarded by a railing, temporary cover, or other temporary barrier
- The atmosphere in the confined space must be tested and continuously monitored for the duration of entry operations
- No hazardous atmosphere is permitted within the confined space whenever an employee is inside the space
- Continuous forced air ventilation must be provided and directed to areas where the employee is performing entry operations
- If a hazard is detected the employee must leave the space immediately and the space must be evaluated to determine how the hazard developed
- Measures must be implemented to protect employees from the hazard(s) before reentering the space
- A safe method for entering and exiting the space must be provided such as a ladder or approved hoisting and retrieval system
- Where changes in the use or configuration of the space may increase the hazards the space must be reevaluated by a competent person.

Reclassification to a Non-Permit Confined Space

Employees who enter a confined space need not comply with the permit-required or alternative entry procedures set forth in the program provided that:

a. It can be demonstrated that the space poses no actual or potential atmospheric hazards and all potential physical hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.
b. If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed by following the permit-required confined space procedures. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated or isolated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated or isolated.
c. The basis for determining that all hazards in a permit space have been eliminated or isolated has been documented.
d. If hazards arise within a permit space that has been declassified to a non-permit confined space under this section, each employee in the space shall exit the space. The confined space shall then be reevaluated by the Competent Person and Entry Supervisors to determine whether it must be reclassified as a permit space or alternative entry.

   Note: Control of atmospheric hazards through forced air ventilation does not constitute elimination of the atmospheric hazards.

Employees who enter into confined spaces that have been reclassified as non-permit entry need not implement and comply with the permit-required or alternative entry procedures established by this Confined Space Entry Program.

The non-permit certification (see attached Confined Space Entry Checklist) shall be made available to each employee who enters the space.

Issuance/Reviewing of Permit

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by the HSE Manager to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12-month period, no review is necessary.

Cancellation/Closure of Permits

The Entry Supervisor shall cancel the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or Attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit and provide the safety department the original copy of the Confined Space Permit.

Training

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program, if a new hazard has been created or special deviations have occurred and before there is a change in assigned duties.

The employee shall be retrained:

- Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.
- Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

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

The supervisor shall certify that the training required by this program has been accomplished.

- The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training.
- The certification shall be available for inspection by employees, their authorized representatives, management, clients and the safety department.