

SUNY OSWEGO

ENVIRONMENTAL HEALTH AND SAFETY

CONFINED SPACE ENTRY PROGRAM- 1st Edition

Procedure Number	Original Effective Date	Revision Number - Date
EHS-CSP-01	1994 April 2018- 1st Edition	April 15, 2018

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1.0 POLICY

It shall be the policy of SUNY Oswego to adhere to all regulatory statutes with regard to confined spaces. Confined spaces are, and have been by their nature, a source of injuries and fatalities to workers and rescuers. With proper planning and adherence to a confined space entry program, these hazards to employees can be minimized.

This Confined Space Entry Program is designed to provide safe procedures and practices for SUNY Oswego Staff and contractor personnel for entering, exiting and working in confined spaces. This program has been developed, following the principles and guidelines required by OSHA 29 CFR 1910.146 Permit-required Confined Space and 1926.Subpart AA Confined Spaces in Construction.

This Confined Space Entry Program will be reviewed at least annually by a committee to be established by the Joint Labor Management Health and Safety Committee and coordinated by the Occupational Safety and Training Coordinator. Any revisions made to this program will be incorporated into the program and distributed to the appropriate personnel.

All persons entering a confined space shall adhere to the conditions set forth in this program. To ensure the safety of all SUNY Oswego Staff documentation of entry into all confined spaces whether they are permitted or not will be required.

SUNY Oswego requires a Confined Space entry permit to be completed for all confined space entries including spaces that are not classified by definition as a Permit Required Confined Space, as well as spaces that have been reclassified by the removal/elimination of hazards.

2.0 RESPONSIBILITIES

2.1 President

The College President is ultimately responsible for health and safety on campus. The President must ensure that adequate funds and resources are made available to comply with this Confined Space Entry Program. Also, the President must provide the authority for all procedures to be carried out.

2.2 Vice President for Administration and Finance

The VP for Administration and Finance must ensure that adequate funds are distributed to the appropriate budgets for the implementation and maintenance of this program.

2.3 Department Heads/Directors

Department Heads/Directors with operations under their supervision requiring confined space activities shall ensure that the procedures in this Confined Space Entry Program are followed and that provisions for safety equipment and employee training are made available.

2.4 Managers/Supervisors

Managers/Supervisors shall be responsible for ensuring their employees do not enter any confined space without following the appropriate procedures specified in this program. Supervisors shall also be responsible for pre-planning of confined space activities, gathering of appropriate safety equipment, ensuring that all affected employees are qualified. Supervisors shall be responsible to ensure employees they assign to work in or near a confined space have been trained. This includes ensuring they have been trained in Lock Out Tag Out as well if it may be required to reclassify the space.

When the need for the use of an outside contractor arises the Manager/Supervisor is responsible for coordinating confined space activities with EHS and outside contractors to ensure the Contractor's Employees have been trained in the requirements of the Confined Space Regulations.

2.5 Employees

Employees are responsible for following the procedures of this Confined Space Entry Program, attending training sessions, and avoiding unauthorized entrance to any confined space identified in the Confined Space Entry Program.

2.6 Occupational Safety and Training Coordinator

The Occupational Safety and Training Coordinator is responsible for coordinating, reviewing and revising the Confined Space Entry Program as stated in section 1. Evaluating confined spaces, recommending appropriate safe entry procedures and personal protective equipment, ensuring proper training, and the calibration of air monitoring equipment for atmospheric testing.

The program and cancelled permits will be reviewed at least annually. Changes and updates to the program may be made whenever necessary if circumstances arise that would warrant a change is needed to further protect the safety of SUNY Oswego staff.

2.7 Outside Contractor(s)

See Section 13.0 for Contractor Responsibilities.

3.0 Definitions

Most if not all of the work SUNY Oswego Staff will conduct in a confined space is regulated under the General Industry Standard (GI). Thus the definitions found therein will be used for this program. Also included are definitions from the Construction Industry Standard (C), and SUNY Oswego (O) specific 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. (GI)

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. (GI)

Authorized entrant- An employee who is authorized by the employer to enter a permit space. (GI)

Barrier- A physical obstruction that blocks or limits access. (C)

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. (GI)

Communication Methods- Voice, visual signals, audible alarms, two-way radios, telephones, etc., are to be used to communicate between the entrants and the attendant, or the attendant to the rescuers. These methods must be tested prior to the entry and must be able to communicate throughout the duration entrants are inside the PRCS. If communication method fails during entry all entrants shall exit the space. (O)

Competent person-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. (C)

Confined space- A space that:

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

(GI)

Control- 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. (C)

Controlling Contractor- The employer that has overall responsibility for construction at the worksite. (C)

Note to the definition of "Controlling Contractor". If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer.

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. (GI)

Early-warning system- 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. (C)

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. (GI)

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. (GI)

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

Entry Employer- Any employer who decides that an employee it directs will enter a permit space. (C)

Note to the definition of "Entry Employer". 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)- 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 § 1910.146 (f). (GI)

Entry rescue - occurs when a rescue service enters a permit space to rescue one or more employees. (C)

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

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.

EHS - Environmental Health and Safety Department (O)

Hazard- A physical hazard or hazardous atmosphere. See definitions below. (C)

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

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

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

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

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

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

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

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

NOTE: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, section 1910.1200 of this Part, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions. (GI)

Host employer- The employer that owns or manages the property where the construction work is taking place. (C)

Note to the definition of "Host employer". 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- Operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating). (C)

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

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.

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

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

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

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; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages. (GI)

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. (C)

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. (GI)

Lockout- 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. (C)

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. (C)

M&O - Maintenance and Operations (O)

MP - Major Projects (O)

Monitor or monitoring- 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. (C)

Non-entry rescue- When a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space. (C)

Non-permit confined space- A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm. (GI)

Oxygen deficient atmosphere- An atmosphere containing less than 19.5 percent oxygen by volume. (GI)

Oxygen enriched atmosphere- An atmosphere containing more than 23.5 percent oxygen by volume. (GI)

Permit-required confined space (permit space)- 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. (GI)

Permit-required confined space program (permit 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. (GI)

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. (GI)

Physical hazard- 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). (C)

Policy- The written statement that demonstrates the employer's commitment to safety. Example- Only employees who have been trained in PRCs can enter a PRC. (O)

Procedure- The employer's outline of steps to follow to ensure safety for employees. Example- All the elements needed for a permit to be issued for a PRC entry. (O)

Program- The written document that spells out the employer's policy and procedures. (O)

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

Qualified person- 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. (C)

Representative permit space- 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. (C)

Rescue- Retrieving, and providing medical assistance to, one or more employees who are in a permit space. (C)

Rescue service- The personnel designated to rescue employees from permit spaces. (GI)

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. (GI)

Serious physical damage- 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. (C)

Tagout- The placement of a tagout 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 tagout device is removed.(GI)

Testing- 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. (GI)

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

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

4.0 IDENTIFICATION AND EVALUATION OF CONFINED SPACE

All confined spaces known to be on campus have been identified and are listed in Appendix A "Confined Space Inventory." Each space has also been evaluated for existing and potential physical and health hazards, control measures necessary for safe entry, safety equipment needed, and procedures necessary prior to entry. Each space is classified as either a Permit Space or a Non-Permit Space. These evaluations are available at the EHS office and may be viewed upon request, it is strongly suggested that they be viewed when the Occupational Safety and Training Coordinator is available to answer any questions that may arise.

Prior to any work involving a confined space, a Permit Required Confined Space Evaluation and Entry Procedure must have been conducted. It will be reviewed by all interested parties including but not limited to the Entry Supervisor, Entrant, Attendant and any Rescue personnel. This will help to ensure that appropriate actions are taken to eliminate hazards, appropriate equipment is assembled and is in good working order, and that each person is familiar with the potential hazards and proper actions to take in the event of an emergency. The Permit Required Confined Space Evaluation and Entry Procedure sheets that were used to classify the spaces can be used as a base starting point, these evaluations are located in EHS. The Occupational Safety and Training Coordinator will be contacted whenever any questions arise from this review or, if a particular activity to be performed in the space poses a hazard not covered in the evaluation sheets.

Any employee identifying an additional space they believe meets the criteria of a confined space must not enter the suspected confined space and must immediately notify their supervisor. The supervisor will then notify the Environmental Health and Safety Office for evaluation. If needed the space will be added to the inventory by EHS.

5.0 PREVENTING UNAUTHORIZED ENTRY

No individual will be permitted to enter a confined space unless specifically authorized to do so in accordance with this Confined Space Entry Program. Entrance into a Permit Space will only be allowed after the Entry Coordinator has completed, signed and posted a Confined Space Entry Permit and procedures in Sections 7.0 and 8.0 are followed or, the Permit Space is reclassified according to section 10.0 or, alternative procedures are used in accordance with section 9.0.

Any unauthorized entry into a confined space shall be investigated by the appropriate supervisor to determine corrective actions necessary to prevent future unauthorized entries.

Permit spaces that meet the definition of a Permit Required Confined Space provided in 29CFR1910.146 have been posted with signs reading "**DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER**" or of other similar language and/or potentially affected employees have been advised of their existence. In addition locks, barriers and permanent structures will be used as necessary to prevent unauthorized entry.

6.0 PERSONNEL

6.1 Authorized Entrant

The authorized Entrant is the individual who is authorized by the Employer to enter a permit space. The Authorized Entrant must:

- A. Know the hazards that may be faced during entry, including the mode, signs, or symptoms, and consequences of any exposure.
- B. Properly use equipment associated with the entry (e.g. gas monitor and protective equipment).
- C. Communicate with the Attendant as necessary to enable the Attendant to monitor Entrant status and to enable the Attendant to alert the Entrant(s) of the need to evacuate the space as required.
- D. Alert the Attendant whenever:
 - 1. The Entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
 - 2. The Entrant detects a prohibited condition.
- E. Exit from the permit space as quickly as possible whenever:
 - 1. An order to evacuate is given by the Attendant or Entry Supervisor.
 - 2. The Entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
 - 3. The Entrant detects a prohibited condition.
 - 4. An evacuation alarm is activated.

6.2 Attendant

The Attendant is the individual stationed outside the permit space who monitors the Authorized Entrant(s) and who perform all Attendant's duties. The attendant must:

- A. Know the hazards that may be faced during entry, including the mode, signs of symptoms, and consequences of the exposure.
- B. Be aware of possible behavioral effects of hazard exposure in Authorized Entrant(s).
- C. Continuously maintain an accurate count of Authorized Entrant(s) in the permit space.

- D. Remain outside the permit space during entry operations until relieved by another Attendant; under no circumstances is the Attendant to enter the space or leave the space unattended with entrant inside.
- E. Communicate with Authorized Entrant(s) as necessary to monitor Entrant status and to alert Entrant(s) of the need to evacuate the space in an emergency.
- F. Monitor activities inside and outside the space to determine if it is safe for Entrant(s) to remain in the space and orders the authorized Entrant(s) to evacuate the permit space immediately if the Attendant:
 - 1. Detects a prohibited condition.
 - 2. Detects the behavioral effect of hazard exposure in an Authorized Entrant.
 - 3. Detects a situation outside the space that could endanger the Authorized Entrant(s).
 - 4. Cannot effectively and safely perform all their duties.
- G. Summon rescue and other emergency services as soon as the Attendant determines that Authorized Entrant(s) may need assistance.
- H. Take the following actions when unauthorized persons approach or enter a permit space while entry is underway:
 - 1. Warn the unauthorized persons that they must stay away from the permit space
 - 2. Advise the unauthorized persons that they must exit immediately if they have entered the permit space. Summon University Police if unauthorized individuals refuse to leave.
 - 3. Inform the Authorized Entrant(s) and the Entry Supervisor if unauthorized persons have entered the permit space.
- I. Perform non-entry rescues if necessary as per rescue procedures.
- J. Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the Authorized Entrant(s).

6.3 Entry Supervisor

The Entry Supervisor is 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 by this section. (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). The Entry Supervisor must:

- A. Inform the Environmental Health and Safety Office when an entry is going to take place.
- B. Know the hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of the exposure.
- C. Perform initial and periodic air sampling from the exterior of the space, and ensure at least one entrant is wearing an air monitor at all times.

- D. Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin. If Alternative Procedures (section 9.0) or Reclassification (section 10.0) is used for entry, all procedures are followed.
- E. Terminate the entry and cancel the permit whenever a condition that is not allowed under the entry permit arises in or near the permit space.
- F. Verify that the means for summoning rescue services is operable.
- G. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations. Summon University Police if unauthorized individuals refuse to leave.
- H. Ensures that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained including when entry operation is transferred at intervals dictated by the hazards and operations performed within the space.
- I. Upon completion of work and notification to University Police, cancel permit and forward completed permit to Environmental Safety and Health Office.

7.0 ENTRY PERMIT SYSTEM

SUNY Oswego requires a Confined Space Entry Permit (entry permit) to be completed for all confined space entries including spaces that are not classified by definition as a Permit Required Confined Space, as well as spaces that have been reclassified by the removal/elimination of hazards.

Prior to entry into a confined space, the Entry Supervisor identified on the entry permit shall sign the entry permit to authorize entry. In cases where it is necessary for multiple entries per shift into the same space the Entry Supervisor will review, update and initial the updated permit prior to each entry.

The completed entry permit shall be made available at the time of entry to all Authorized Entrants, by posting the permit at the entry portal or by any other equally effective means; so that the Entrant(s) can confirm that pre-entry preparations have been completed.

The duration of the entry permit may not exceed the time required to complete the assigned task or job identified on the permit. If the job last for more than one work shift a new permit will be issued. The entry permit is valid for one continuous entry only. Therefore, after any extended breaks or lunch pre-entry procedures must be repeated and the entry permit reissued.

The entry permit is valid for one job and one space only and will expire at the end of the work shift. If multiple entries are needed such as the job is interrupted by break periods, the existing entry permit will be reviewed and updated to include any changes in the conditions, new air monitoring data and any additional information as needed. The Entry Supervisor will note the time of the re-evaluation and initial the entry permit.

The Entry Supervisor shall terminate and cancel the entry permit when:

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

The canceled entry permit will be copied and distributed, within 24 hours, as follows:

- (i) Original to Environmental Health and Safety.
- (ii) An electronic copy will also be maintained by EHS

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

8.0 ENTRY PROCEDURE

8.1 Pre-Planning

Notification of planned entry will be given to the Environmental Health and Safety Department.

The Entry Supervisor will make sure that all necessary equipment is assembled, inspected and in good working condition, per manufacturer recommendations. Also, the Entry Supervisor must insure that all personnel to be associated with the permit space entry are trained and qualified for their particular role in the entry.

SUNY Oswego employees will not enter a Permit Required Confined Space that cannot be reclassified by the removal of hazards, and the use of Non-Entry Rescue Equipment is infeasible.

8.2 Entry Permit

EHS will be notified of all confined space entries prior to entry
Entry Permits will be obtained from the EHS Office
EHS will document Permits that are issued and returned
The Entry Supervisor should initiate the permit.
A permit is still required for reclassified spaces.

8.3 Personnel

Each permit space entry must identify the responsible individuals for the following roles:

- Entry Supervisor
- Attendant
- Authorized Entrant

The Entry Supervisor may also be the Attendant or an Authorized Entrant. Personnel must be identified on the permit. An Attendant must be on duty whenever anyone is in the permit space. All individuals involved in a confined space entry must have completed adequate training to function in his/her capacity.

8.4 Surveillance

The area surrounding the space will be surveyed to avoid hazards such as drifting vapors from tanks or other sources of hazardous materials, vehicle exhaust, inclement weather, traffic or distraction from unauthorized individuals.

Work zones shall be established using barriers and other means as necessary to ensure the safety of working personnel by eliminating pedestrian and vehicle traffic.

8.5 Hazard Identification and Control

Potential hazards within and outside the confined space must be identified and recorded on the permit. Prior to entry all recognized hazards must be abated. Such information must be recorded on the permit.

Whenever practical, the space should be isolated. Isolated means the space is 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; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages. When the space is not isolated prior to entry, the Entry Supervisor must make note of the non-abated hazards on the entry permit.

Hot work is not permitted in any confined space (permit or non-permit) without the consent of the SUNY Oswego Fire Marshal or the Occupational Safety and Training Coordinator if the Fire Marshal is unavailable. When it is necessary to weld in a confined space it will require both a Confined Space Entry Permit and a Hot Work Permit. In such instances the SUNY Oswego Hot Work Program/Procedure will also be followed. A copy of the Hot Work Permit will be located at the entry site at all times and will be turned in with the Entry Permit. Under no circumstances will the Entry Supervisor allow Hot Work to be conducted without a Hot Work Permit issued by the appropriate EHS staff. In the event of an emergency, the Fire Marshal or the Occupational Safety and Training Coordinator shall be contacted by phone and the Hot Work Permit will be filled out and sent via email that indicates permission has been authorized. If it is not possible to send the Hot Work Permit via email an email confirmation giving permission to proceed will be issued.

Under extreme emergency circumstances the verification/permission can be given verbally through a conference call to the Occupational Safety and Training Coordinator and the Fire Marshal with the Entry Supervisor the Entrant and the Attendant, the call will be followed up by an email for documentation purposes. Emergency contact numbers are available in CHP. Permits can be printed from the EHS website and will still be filled out prior to entry and submitted to EHS on the next business day.

8.6 Space Ventilation

When mechanical ventilation systems are used, they will be set at 100% outside air.

When possible, additional manholes or openings will be opened to increase air circulation. Portable blowers may be needed to augment natural circulation.

If initial air monitoring readings do not show acceptable conditions, continue ventilation and repeat testing. Entry will not begin until testing has demonstrated that the hazardous atmosphere has been eliminated. If atmospheric testing continues to show unacceptable conditions the Entry Supervisor must notify the Occupational Safety and Training Coordinator and the Director of Environmental Health and Safety.

8.7 Testing

8.7.1 General

The confined space atmosphere shall be tested to determine whether dangerous air contaminants and/or oxygen deficiency exists with a direct reading gas monitor.

Testing shall be performed by the Entry Supervisor who has been trained in the use of the gas monitor(s) to be used. Initial monitoring of the space will be conducted using remote sampling from the exterior of the space. Testing should be conducted at several levels to test for stratified hazardous atmospheres, a minimum of 3 levels will be tested to include a sample from the lowest level of the space, the middle of the space and the top of the space. In spaces that are greater than 8', samples will be taken at least every 4'. Upon space clearance for entry the space will be continually monitored. The Entry Supervisor will ensure that at least one Entrant will wear a monitor in the space. Whenever the work is anticipated to take more than one hour, an additional monitor will be used so that periodic monitoring can take place from the exterior of the space using the above method and the results will be documented on the permit hourly.

8.7.2 Acceptable Conditions

The minimum acceptable atmospheric conditions for entry are:

- Oxygen above 19.5% and below 23.5%
- Flammability less than 10% of the gases lower explosive limit (LEL)
- Hydrogen Sulfide below 10 ppm
- Carbon Monoxide less than 35 ppm

Testing for additional contaminants may be required to prevent entry into a hazardous atmosphere. The Entry Supervisor must contact his/her supervisor and/or the Occupational Safety and Training Coordinator if he/she feels there is any chance of exposure to other hazardous chemicals. Acceptable entry conditions for other identified hazardous substances will be less than 1/2 of the identified substances permissible exposure limit, threshold limit value or other recognized exposure limit.

Testing results and the monitor information must be recorded on the entry permit.

Continuous gas monitoring in the vicinity of the Entrants shall be performed during all confined space operations.

When entry is proposed into a space which cannot meet the minimum atmospheric conditions, entry must be authorized by the Occupational Safety and Training Coordinator or designee.

8.8 Harness and Tripod system with winch

To facilitate non-entry rescue, a retrieval system or method 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, in such cases SUNY Oswego employees will not enter. Each Authorized Entrant shall use a full body harness, with a retrieval line attached to the Entrant and to the tripod system. The tripod will be arranged so that rescue can begin as soon as the Attendant becomes

aware that rescue is necessary.

8.9 Entry

The entry is to be made according to all conditions of the permit.

The Entry Supervisor must sign the permit allowing entry into the space.

The entry must be discontinued and the space evacuated if the conditions vary from those listed as acceptable.

Entry is permitted only for the duration of the permit.

Minimally acceptable conditions:

1. Minimization of physical hazards including electrical, hydraulic, steam, and mechanical hazards.
2. Air quality must meet conditions listed on the permit.

Hot work and/or use of hazardous materials (e.g. solvents, paints, cleaners) is not permitted unless authorized by the Occupational Safety and Training Coordinator. These activities may create hazards in a normally non-hazardous confined space and will require the Safety Data Sheet on site and will require the use of a permit

8.10 Cancellation of Permit/Recordkeeping

Upon completion of the job, change of conditions which result in an unexpected evacuation of the permit space, emergency evacuations, shift change, otherwise discontinuity of the job, the Entry Supervisor must cancel the entry permit. Copies are to be distributed per section 7.0.

9.0 ALTERNATIVE PROCEDURES

The OSHA regulations allow permit spaces which have, as their only hazard, an actual or potential hazardous atmosphere to use alternative procedures for entry. SUNY Oswego chooses not to use Alternative Procedures as an option.

10.0 RECLASSIFICATION OF A PERMIT SPACE

A permit-space may be temporarily reclassified as a non-permit confined space if there are no potential atmospheric hazards and if all other hazards within the space are eliminated without entry into the space. The reclassification is valid as long as the non-atmospheric hazards remain eliminated. Spaces such as crawl spaces, steam pits for inspection purposes, as well as other spaces that we are checking the air as a precaution are not PRCS and thus do not need to be temporarily reclassified.

Written certification and/or verification by the Occupational Safety and Training Coordinator is required to reclassify a permit required confined space. A Reclassification of Permit Space Certificate will be issued. Reclassification is good for one entry/job only.

Under extreme emergency circumstances the verification/permission can be given verbally through a

conference call to the Occupational Safety and Training Coordinator and the Fire Marshal with the Entry Supervisor the Entrant and the Attendant, the call will be followed up by an email for documentation purposes. Emergency contact numbers are available in CHP. Permits can be printed from the EHS website and will still be filled out prior to entry and submitted to EHS on the next business day.

11.0 EMERGENCIES

11.1 Self Initiated Rescue

Emergency exit may be self initiated by the Entrants or ordered by the Attendant.

A self initiated evacuation is initiated when:

1. An automatic alarm is activated.
2. The Entrant(s) perceives that they are in danger or feel the need to exit.
3. The Entrant(s) identifies a hazard not accounted for on the permit.
4. A condition develops which is not in compliance with the permit.

The Attendant will initiate an evacuation whenever the Attendant observes:

1. A condition which is not allowed in the entry permit.
2. Behavioral effects of the hazard exposure.
3. A situation outside the space which could endanger Entrants.
4. An uncontrolled hazard within the permit space.

11.2 Emergency Rescue Assistance

Upon evaluation of the confined spaces located on our campus and the maintenance work performed in such spaces SUNY Oswego has chosen to use non-entry rescue via the use of tripod systems.

We do however recognize that there may be rare instances when the use of a non-entry retrieval system is not practical, such as the entry into a horizontal space. In these instances a full evaluation of the space will take place to see if the space can be reclassified. In the event re-classification is not an option the work will be contracted. The contracted Confined Space Rescue Team will be evaluated in accordance with 29 CFR 1910.146(k)(1).

In cases of emergency exit in which First Aid assistance is needed, the Attendant will immediately radio University Police and state that they have a 911 Emergency. The Attendant will provide the following information:

- Your name
- Nature of the Confined space emergency – such as a medical issue.
- Location
- Number of people involved

- Assessment of victim condition

For medical related emergencies such as heat exhaustion, slips resulting in strains or sprains – Non-entry rescue will be used to remove the entrant from the space and University Police will be notified so that medical assistance can be dispatched.

The Attendant should attempt non-entry retrieval if possible while waiting for the emergency responders. The Attendant can exercise discretion and wait for EMS trained personnel if they so desire.

12.0 TRAINING

All employees whose work is regulated by this Confined Space Entry Program will be trained to reach an understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

The amount and type of training needed will depend on the individual's duty assignment. For example, some employees may only be required to know the existence, location, and danger posed by a permit space. Others would need considerably more training if they are members of a PRCS team. Still others would need training as it pertains to the type of entry procedures used (i.e., alternative procedures or reclassifying to non-permit space procedures). The overall intent of this training is to give employees the understanding, knowledge, and skills necessary for the safe performance of their assigned duties in relation to the permit spaces of concern.

The following training levels have been established:

1. General Information Training - What is a Confined Space, labeling and other methods used to protect employees from entering. Staff in this category include but are not limited to: Custodial, Garage, Logistics, Building Trades Finishes, Furniture, Grounds, Faculty and Office Staff.
2. Awareness Training - How to identify a confined space, confined space hazards, permit required confined space, how to fill out a permit, duties of attendant, entrant, entry supervisor, reclassification of a PRCS, Alternative Procedures, a discussion on our equipment. Staff in this category include but are not limited to: Building Trades Construction, Utilities Staff, CTS. (Those trained to this level can not work in a PRCS until they have additional training).
3. Permit Required Confined Space Entry Training- All of the elements of the Awareness Training as well as training on the equipment and how to perform non-entry rescue. Staff in this category include the Utilities Staff. These Employees will receive an annual refresher training.

Training shall be provided to each affected employee:

1. Before the employee is first assigned duties under this section.
2. Before there is a change in assigned duties.
3. Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained.
4. Whenever there is a reason to believe there are deviations from the permit space entry procedures

or inadequacies in the employee's knowledge or use of these procedures.

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

Training will be coordinated by Environmental Health and Safety and repeated as needed or upon request.

A certification (Record) of training will be maintained by Environmental Health and Safety. The certification (training record) shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification (record) shall be available for inspection by employees and their authorized representatives.

13.0 CONTRACTORS

When the need for the use of an outside contractor arises the Manager/Supervisor is responsible for coordinating confined space activities with EHS and outside contractors to ensure the Contractor's Employees have been trained in the requirements of the Confined Space Regulations.

The Contractor will meet with the Occupational Safety and Training Coordinator to review:

- The Confined Space Program

- Discuss any hazards of entry likely to be present

- Training Records to ensure Contractors Employees have been trained

- Review Rescue Procedures/Plans

- Review Permit to be utilized if applicable

- Coordinating any confined space activities with appropriate SUNY Oswego personnel.

The 1926 regulations will apply for construction related entries and the 1910 regulations will apply for maintenance related entries.

If the work falls within the parameters of 29 CFR 1926 **SUNY Oswego will be considered the Host Employer** and the Contractor will be responsible to follow all rules and regulations found in 29 CFR 1926 Subpart AA.

Host employer means the employer that owns or manages the property where the construction work is taking place.

Note to the definition of "Host employer". 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. For example, SUNY Oswego transfers host employer would be when a project is being overseen by DASNY or SUCF.

Before entry operations begin, **SUNY Oswego (host employer)** will provide the following information, if it has it, to the **controlling contractor**:

- The location of each known permit space;

- The hazards or potential hazards in each space and/or the reason it is a permit space;

Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.

Before entry operations begin, the **controlling contractor** will obtain the **host employer's** information about the permit space hazards and previous entry operations; and provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:

The information received from the host employer;

Any additional information the controlling contractor has about the hazards or potential hazards in each space or the reason it is a permit space

The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.

Before entry operations begin, each **entry employer will**:

Obtain all of the controlling contractors' information regarding permit space hazards and entry operations;

Inform the controlling contractor of the permit space program that the entry employer will follow, including any hazards likely to be confronted or created in each permit space.

The **controlling contractor and entry employer(s)** must coordinate entry operations when:

More than one entity performs permit space entry at the same time; or

Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.

This includes the coordination of entry operations with the contractor, when both College personnel and contractor personnel will be working in or near permit spaces.

After entry operations:

The controlling contractor will debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations;

The entry employer will inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations;

The controlling contractor will apprise the host employer of the information exchanged with the entry entities.

Unless a host employer or controlling contractor has or will have employees in a confined space, it is not required to enter any confined space to collect the information.

If there is no controlling contractor present at the worksite, the requirements for, and role of, controlling contractors will be fulfilled by the host employer or other employer who arranges to have employees of

another employer perform work that involves permit space entry.

14.0 EQUIPMENT USE AND MAINTENANCE

All equipment needed for safe entry, work and exit of confined spaces will be provided and maintained by SUNY Oswego, and as per manufacturer's recommendations. This equipment may include:

Equipment	Location
3- 4 Gas Meter: BW GasAlert, Max XT2, serial # for CHP MA215-026372, serial # for meter #1 Plumbing MA215-025659 and meter #2 MA217-016299 .	CHP, Plumbing
4- Blowers: 2, Allegro blowers, model 9514-25, serial # 9513-20241 and 190647. 2 Coppus blowers, model 1-500249 and 1-500251-02	CHP
Communications equipment-individual radios	Shop issued
Personal protective equipment	Shop issued
Appropriate lighting	Shop issued
Barriers and shields to protect entrants and exclude bystanders	Grounds Department Plumbing Shop if trench box is needed
Ladders	Shop issued
2- Tripods : DBI SALA, model 8000000 and 8000010 1- Winch : DBI SALA,SALALIFT 2, model 8102001 serial # 38064	CHP
2- Harness: DBI SALA, model 1103270, serial # E00403500ACA5437 and E00403500A926182	CHP

Each piece of equipment must be signed out by the appropriate Entry Supervisor and inspected prior to use. The Entry Supervisor must ensure that employees are trained on the proper use of the equipment. Additionally, air monitoring instrumentation must be calibrated and bump tested prior to use. The Occupational Safety and Training Coordinator or designee will calibrate the meters at least every 180 days or in accordance with the manufacturer.