

FARMINGDALE STATE COLLEGE

CONFINED SPACE ENTRY

Written Program

29 CFR 1910.146

Provided by,

Environmental Health and Safety

Farmingdale State College
STATE UNIVERSITY OF NEW YORK

Confined Space Entry

Written Program

29 CFR 1910.146

Many workplaces contain areas that are considered confined spaces because, while they are not necessarily designed for people, they are large enough for workers to enter and perform specific jobs. A confined space also has limited or restricted means for entry and is not designed for continuous occupancy. Confined spaces include, but are not limited to, tanks, vessels, storage bins, vaults, pits, manholes, tunnels, equipment housing, or any space that meets the definition of a confined space.

The greatest risk is not having enough oxygen to breathe, otherwise known as asphyxiation. When there is not enough breathable oxygen or when gases are present that displace the breathable oxygen, the atmosphere is considered asphyxiating. Such an atmosphere is dangerous not only to the employees entering the confined space, but to would-be rescuers, as well. Over 60% of confined space entry deaths happen to rescuers. In addition to asphyxiation, employees face other hazards in confined space entry, including being engulfed, exposure to toxic gases, becoming trapped and/or slipping and falling.

These spaces can present physical and atmospheric hazards that can be life-threatening – but, with proper planning, training, and awareness prior to and while entering the space to perform work, these hazards can be reduced or eliminated. That is what this Written Confined Space Entry Program endeavors to do.

For clarification or assistance, contact:

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Table of Contents

Confined Space Entry Program (CSEP)

FARMINGDALE STATE COLLEGE POLICY	3
PURPOSE	4
SCOPE AND APPLICATION	4
DEFINITIONS.....	4
Confined Space Definitions.....	4
Hazard Definitions	5
Person/Role Definitions	5
Hazard Control Definitions.....	5
Permit Definitions	6
RESPONSIBILITIES.....	6
Environmental Health and Safety	7
Entry Supervisor	7
Attendant	7
Entrant	8
Contractors	8
IDENTIFY CONFINED SPACES.....	9
Permit Required Confined Spaces (PRCS)	9
Non-permit Required Confined Spaces (NRCS)	9
Elevator Mechanical Spaces.....	10
CONFINED SPACE HAZARDS.....	10
CONFINED SPACE REQUIREMENTS	11
Acceptable Entry Conditions.....	11
Isolating the Permit Space	12
CONFINED SPACE ATMOSPHERIC TESTING.....	12
Evaluation	12
Verification.....	13
Measurement Duration	13
Stratified Atmospheres	13
Testing Procedures	14
CONFINED SPACE ENTRY PROCEDURES	14
Preparation	14
Non-permit Confined Spaces	15
Permit Required Spaces	15
Equipment Required	16
CHANGES IN SPACE USE OR CONFIGURATION	17
Confined Space Reclassification.....	17
RESCUE AND EMERGENCY SERVICES	17
Offsite Emergency Services.....	17
Non-Entry Rescue	18
TRAINING	18

Requirements.....	18
PROGRAM REVIEW AND UPDATE	19
COMPLIANCE WITH THIS PROGRAM	19
APPENDIX A: Confined Space Warning Signs with Unique Space ID's (examples)	
APPENDIX B: Identified Confined Spaces	
APPENDIX C: Confined Space Entry Check List and Permit	
APPENDIX D: Reclassifying Confined Space Form	

Confined Space Entry Written Program

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Farmingdale State College Policy

All spaces owned or operated by the State University of New York at Farmingdale State College (FSC) that meet the definition of a confined space shall be identified and appropriately marked, and access to such spaces shall be controlled.

Employees are prohibited from entering any space meeting the definition of a permit required confined space, unless each of the following conditions are met:

1. The appropriate FSC department determines that employees must enter a permit confined space to perform the mission of the department and/or duties of the employee.
2. The employees are trained in the entry duties under this program which they are to perform.
3. The space is rendered safe for entry by:
 - a) issuance and compliance with the conditions of the entry permit; or,
 - b) the space is classified as a non-permit space; or,
 - c) the space is a permitted confined space that is reclassified as a non-permitted space prior to entry.

The above policy is MANDATORY and MUST be followed AT ALL TIMES; failure to do so could result in loss of life or limb. Report instances of non-compliance to your supervisor or to Environmental Health and Safety (EH&S); appropriate disciplinary action will be considered.

Purpose

Most accidents and deaths that occur during confined space entries are attributed to a failure to recognize and control hazards associated with confined spaces and inadequate emergency response.

This program is designed to help prevent confined space tragedies from occurring. Following these procedures will support the safety of the employees at FSC.

Scope and Application

This program has been developed to protect all of the College's employees and contractors from the serious hazards associated with entering and working within a confined space. As required by the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.146, Permit-Required Confined Spaces, this program establishes procedures to regulate entry into confined spaces, and to ensure the safety of the employees who enter or work in a confined space.

FSC has established a written, comprehensive program which includes provisions for working in and around confined spaces.

This confined space program will cover the following:

- Preventing unauthorized entries
- Process for identifying and evaluating hazards
- Establishing procedures for safe entry
- Implementing the proper permit system
- Equipment and materials for safe entry
- Entrant, attendant, and authorizing supervisor responsibilities
- Rescue and emergency procedures
- Developing post-entry procedures, and conducting post-illness/injury reviews

Definitions

Confined Space Definitions

Confined Space: A space that meets all three of the following conditions:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work;
2. Has limited or restricted means of entry or exit;
3. Is not designed for continuous human occupancy.

Non-Permit Space: A confined space that does not contain any actual or potential hazards capable of causing death or serious physical harm.

Permit Required Confined Space (Permit Space): A confined space which has one or more of the following characteristics:

1. Contains or has the potential to contain a hazardous atmosphere;
2. Contains a material that has the potential to engulf an entrant;
3. Has an internal configuration that could trap or asphyxiate an entrant, such as inwardly converging walls or a floor that slopes downward and tapers to a smaller cross-section; and/or,

4. Contains any other recognized serious safety and/or health hazard.

Hazard Definitions

Employees could be exposed to hazardous atmospheres, physical hazards, and other potential hazards when working in confined spaces (see *Confined Space Hazards on page 10*). Examples include, but are not limited to:

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 force on the body to cause death by strangulation, constriction, or crushing.

Hazardous Atmosphere: An atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to escape unaided from a permit space, injury, or acute illness. Hazardous atmospheres may be created by conditions such as, but not limited to:

1. Flammable gas, vapors, or mists in excess of ten percent of the lower flammable limit (LFL).
2. Airborne combustible dust at a concentration that:
 - a) Meets or exceeds its LFL.
 - b) Obscures vision at a distance of five feet or less.
3. Atmosphere oxygen concentration below 19.5 percent or above 23.5 percent.
4. Atmospheric concentrations at or above the Permissible Limit (PEL) of substances identified in Subpart Z of 29 CFR 1910.
5. Any other atmospheric conditions which are immediately dangerous to life and health.

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.

Person/Role Definitions

Attendant: The trained individual stationed outside of the permit space who monitors the authorized entrants and who performs all attendant duties.

Entrant: The trained individual who enters the permit space.

Entry Supervisor: The trained individual with the responsibility to:

1. Assure that acceptable entry conditions are present within the permit space under his/her jurisdiction;
2. Issue a permit authorizing entry;
3. Oversee entry operations;
4. Terminate the entry and permit.

Hazard Control Definitions

Conditions of Entry: The conditions that must exist in a permit space to allow employees to safely enter and perform duties within the space.

Blanking/Binding: Absolute closure of a pipe, line, or duct by fastening a solid plate 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.

Double Block and Bleed: The closure of a line, duct, or pipe by closing and locking/tagging out two in-line valves, and opening and locking/tagging out a drain or vent in the line between the two closed valves.

Inerting: The displacement of the atmosphere in a permit space by noncombustible gas to such an extent that the resulting atmosphere is noncombustible, producing an IDLH oxygen-deficient atmosphere.

Isolation: The complete removal of a permit space from service and the complete protection of that space from the release of energy or material.

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.

Permit Definitions

Alternate Entry Procedures: Spaces that are found to have only actual or potential atmospheric hazards may follow the procedures outlined herein if the following can be demonstrated:

- The only hazard posed by the permit space is an actual or potentially hazardous atmosphere; and,
- It can be demonstrated that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry; and,
- The monitoring and inspection data is maintained to support the conclusion of no atmospheric hazards.

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

Entry: The action of breaking the plane of an opening of a permit space with any part of the body.

Permit: The written or printed document authorizing entry into a permit space and designating the requirements for entry.

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

Testing: The process by which the hazards that may confront entrants are identified and evaluated. This term includes the specification of tests that are to be performed in the permit space.

Responsibilities

All employees must comply with the requirements of the Confined Space Entry Program (CSEP).

Employees should understand that attempting to enter a confined space can cause loss of life or limb to themselves or another employee (i.e. such as a would-be rescuer). Questions regarding confined space entry procedures should be directed to management. Management enforces the confined space entry procedures, including the use of corrective disciplinary action when necessary.

The following designated individuals are responsible for key aspects of the Confined Space Entry Program:

Environmental Health and Safety

Environmental Health and Safety, and specifically the Industrial Hygiene Officer, has the primary responsibility for the implementation and enforcement of the CSEP and is responsible for the following:

- Develop the College's Written Confined Space Entry Program and update when necessary.
- Provide guidance in the selection of air monitoring equipment, maintenance, field calibration, and training of its use.
- Assist in the evaluation and identification of confined spaces; wherever possible, each identified space will be marked with a Confined Space Warning Sign that includes a unique space ID at all portals of entry (see Appendix A for examples).
- Perform air monitoring or testing of confined space work, as necessary/required.
- Develop and assist with conducting confined space training.

Entry Supervisor

Entry supervisors are responsible for providing the necessary direction and support to ensure the effective implementation of the CSEP for their work areas. Entry supervisors are responsible for the overall confined space entry and must coordinate all entry procedures, tests, permits, and other required duties. Entry supervisors are also responsible for the following:

- Assure that all employees involved in the work are trained in accordance with 29 CFR 1910.146 and other requirements.
- Determine if acceptable entry conditions are present at the confined space where the entry is planned.
- Inform authorized entrants and attendants of the potential hazards associated with entering each space.
- Sign-off on the entry permit to allow employees to enter the confined space.
- Verify 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 signing the permit.
- Terminate the entry and cancel the permit when appropriate.
- Coordinate confined space entry operations with an outside contractor should work involve spaces owned and/or operated by FSC but where work is performed by an outside party.
- Verify rescue services are available and communication systems are functioning.
- Instruct any unauthorized persons to evacuate the space when it is safe to do so. Remove unauthorized persons from the work area or who enter or attempt to enter the permitted space.

Attendant

At least one attendant is required outside the confined space for the duration of the authorized entry operation. All attendants are required to have completed confined space training before they are allowed to serve as attendants. Attendants are responsible for the following:

- Know the hazards that may be faced during entry of the confined space(s).
- Perform no other duties beyond those specifically stated for attendants.
- Station themselves outside the confined space at the opening to the space, and remain in place throughout the duration of the entry or until relieved by another authorized attendant.
- Continuously maintain an accurate count of entrants in the confined space and ensure a means to accurately identify authorized entrants.
- Order an immediate evacuation of the space:

- Upon becoming aware of the development of any sign or symptoms of an exposure to a dangerous situation.
- Upon becoming aware of the development of a condition that could endanger the entrants.
- If the attendant cannot effectively and safely perform all of the attendant's responsibilities.
- To summon rescue and other emergency services as soon as the attendant determines entrants need assistance to escape the confined space.
- Warn unauthorized persons to stay away from the confined space. Do not allow unauthorized persons to enter the space.

Entrant

All entrants must be authorized by the entry supervisor to enter a confined space, have received the required training, use the proper equipment, and observe the entry procedures and permit. Entrants are responsible for the following:

- Know the hazards that may be encountered during entry.
- Enter the space and perform the assigned work as expediently as possible.
- Communicate with the attendant frequently or upon request to confirm all is well.
- Immediately evaluate the space and alert the attendant or entry supervisor whenever any of the following occurs:
 - The development of a condition that causes a dangerous situation.
 - The development of a sign or symptom of exposure to a dangerous situation.
 - Failure of any required equipment to enter the permitted space.
- Exit the permit space as quickly as possible whenever:
 - Attendant or entry supervisor gives an order to evaluate the permit space.
 - Entrant recognizes any warning sign or symptoms of a dangerous situation.
 - Entrant detects a prohibit condition not in compliance with the permit.
 - Failure of any required equipment to enter the permitted space.

Contractors

Outside contractors may need to enter a permit space to perform work for the College. The Environmental Health and Safety Office shall be informed when a contractor will be entering an FSC permitted confined space.

- Contractors shall be informed that the space is a permit-required confined space and known hazards within the space.
- Contractors must follow the FSC Confined Space Entry Program per OSHA Standard 29CFR 1910.146 and use an authorized permit for entry.
- Require the contractor to eliminate any temporary hazards created by the work, or notify the supervisor.

Contractors are responsible for the following:

- Obtain and use the available information provided.
- The entry supervisor shall notify any employees near or affected by entry.
- If employees shall enter the space with contractor employees, the entry supervisor shall ensure that entry operations are coordinated with the contractor or designee to assure that:
 - All entrants of both employees can be accounted for during the entry.

- The work of one employer does not endanger the employees of second employer.
- There is an attendant in place whenever employees of either employer have entered the space.
- Debrief the contractor at the conclusion of the entry regarding the permit space program followed and any hazards confronted or created in the space during work.

Identify Confined Spaces

Each confined space listed shall be identified as a non-permit or permit required space. The hazards of each permit required space shall be catalogued on the list. FSC supervisors are encouraged to contact the Environmental Health and Safety Office (Industrial Hygiene Officer) for assistance with classifying confined spaces. Confined spaces shall be considered hazardous until an evaluation is completed.

Departments shall notify the Industrial Hygiene Officer if additional confined spaces are identified or if new ones are installed or created.

Environmental Health and Safety will maintain a campus-wide list of known permit-required confined spaces (PRCS's) and non-permit required confined spaces (NRCS). See Appendix B for a list of known PRCS's and NRCS's identified as part of a professional assessment conducted in May of 2025.

Permit Required Confined Spaces (PRCS)

The College has identified known permit required confined spaces. Please note that FSC does not allow the use of alternate procedures during permit space entry. Entry Supervisors are required to complete an entry permit for every permit required confined space and have the permit onsite for the duration of the entry. The following are examples of permit required spaces on campus:

Permit Required:

- Manholes
- Tanks
- Boilers
- Tunnels
- Certain Air Handler Units

Non-permit Required Confined Spaces (NRCS)

Non-permit required confined spaces do not contain additional hazards such as the potential of a hazardous atmosphere or the potential for workers to become engulfed or trapped by materials. Entry into confined spaces that do not require a permit should be made with caution. The following are examples of non-permit confined spaces on campus:

Potentially Non-permit Required:

- Attics
- Crawlspace
- Plenums

- Mechanical Rooms

Note: *The locations of permit-required and non-permit required confined spaces are continuously under review.*

Elevator Mechanical Spaces

Elevator mechanical spaces at FSC are generally considered permit required confined spaces. Functioning elevators and the associated devices must be locked/tagged out (LOTO) according to LOTO procedures before entry into an elevator shaft/pit.

If a hazardous or potentially hazardous atmosphere does not exist (e.g., a chemical leak, spill, or welding) within or in close proximity to an elevator pit, the pit may be reclassified as a non-permit required confined space for the duration of the event. Employees who enter the pit under these circumstances must perform operations in accordance with FSC's Confined Space Entry Program.

Confined Space Hazards

Each supervisor shall evaluate the hazards of a confined space before allowing employees to enter. Supervisors shall identify the following, but not limited to, if present:

Atmospheric Hazards: Oxygen depleted atmosphere; toxic or explosive gases.

Physical and General Hazards: Slip, trip, or fall; falling objects; moving parts of equipment or machinery; electrical shock; temperature extremes; crushing; pinching; or excessive noise.

Physical and general hazards of a confined space must be evaluated and controlled prior to entry. Common techniques that could be used for the specific hazards listed include, but are not limited to:

- Noise: Depending on the work being performed in the confined space, there could be a potential noise hazard. A noise evaluation will be performed if necessary. Employees will be isolated from the space during activities that create high noise levels. Hearing protection will be provided whenever necessary.
- Falling Objects: Barriers will be used to protect the opening of a confined space to minimize the risk of falling objects. Equipment will be isolated and locked out if it presents an overhead hazard. The area will be surveyed for potential falling objects and controlled appropriately. Hard hats will be provided when overhead hazards are present.
- Temperature Extremes: Temperatures in confined spaces that are either heated or cooled will be brought to a safe level whenever possible. All spaces with possible heat or cold extremes will be tested by an applicable thermometer and the results of the air and surface temperatures in the confined space must be listed on the permit.
- Chemical Residuals: If the confined space held a corrosive or otherwise toxic chemical, the surfaces will be inspected and tested to ensure that it has been sufficiently purged of its hazardous substance. Litmus, pH paper, or other means will be used to test the residuals on the

surfaces of the confined space to determine the extent of the hazard from contact with this residual chemical.

- **Engulfment Hazards:** The confined space must be visually inspected to determine if there are any materials present within the space that could potentially engulf an entrant. Any substance contained within the space greater than four feet in depth constitutes an engulfment hazard. Whenever possible the space will be purged and the material that could cause an engulfment hazard will be removed. Any systems feeding the confined space must be blanked, blind flanged, capped, or sealed to prevent additional material from entering the space unintentionally and creating an engulfment hazard. Staging and planks will be used in situations when the material cannot be removed during entry. Lifelines will also be attached to the entrant.
- **Wet or Slick Surfaces:** Visual inspection of the confined space will be completed to check for wet or slick surfaces. Standing liquids increase the chance of a fall or slip. There is also an increased risk of electrical shock if tools that require electricity are being used in the confined space. Check the space for this hazard and use the appropriate control measures to remove any excessive liquid build up around the space.
- **Mechanical Hazards:** All confined spaces and equipment associated with the space will be assessed to determine if there are any mechanical hazards present. Lockout/Tagout energy procedures will be utilized to ensure all hazardous energy is controlled.

Precautions must be taken to prevent creating hazardous, toxic, or explosive atmospheres while employees are within a confined space. The types of materials used while working in a confined space must be thoroughly evaluated. Testing the atmosphere inside the confined space is necessary before entering and during the time when work is being performed. The use of toxic or flammable chemicals or materials can change the atmospheric condition of a confined space after initial testing. When an atmosphere is changed, it can create a dangerous environment.

Examples of work which can create a potentially dangerous atmosphere:

- Using chemical products (painting, cleaning with solvents, applying adhesives, etc.)
- Hot work
- Mixing of incompatible chemicals

Confined Space Requirements

The Industrial Hygiene Officer and/or department supervisors shall perform a workplace risk assessment to identify confined spaces, the hazards in or around the spaces, and the potential for hazards to develop in or around the spaces. The assessment shall identify all known permit required confined spaces, along with energy sources, moving equipment, and pipe inlets which must be controlled before entering the space.

Acceptable Entry Conditions

Before a permit space that may have a hazardous atmosphere can be entered, the atmosphere must be tested using the steps identified on the permit. A Confined Space Entry Check List and Permit is provided as Appendix C. Verification testing is done to make sure that the chemical hazards that may be present

are below the levels necessary for safe entry, and that they meet the conditions identified on the permit. Test the atmosphere in the following order: (1) for oxygen, (2) for combustible gases, and then (3) for toxic gases and vapors. The testing results, the actual test concentrations, must be recorded on the permit near the levels identified for safe entry.

The atmosphere will be considered unacceptable if the following conditions are present:

- Oxygen level is below 19.5%
- Oxygen level above 23.5%
- Flammable gas levels exceed 10% of the Lower Flammable Limit (LEL)
- Carbon monoxide levels above 25 ppm
- Hydrogen sulfide (H₂S) above 10 ppm
- Sulfur Dioxide (SO₂) above 2ppm

Before an employee enters the space(s), the internal atmosphere shall be tested with a calibrated direct-reading instrument. Air monitoring meters and equipment are maintained by the Industrial Hygiene Officer, as well as the Fire Marshal – consult with either or both prior to entry to ensure that the proper direct-reading instrument is used and is in good working order. Any employee who enters the space shall be provided an opportunity to observe the pre-entry testing. The atmosphere within the space shall be periodically tested as necessary to ensure the space is maintained within the limits of the acceptable entry conditions per OSHA standards.

Isolating the Permit Space

All hazardous energy sources associated with permit spaces which may expose entrants to potential injury must be isolated, locked out and/or tagged out prior to entry by way of:

- A. Purging, Inerting, Flushing, or Ventilating Permit Spaces: All permit entry spaces are thoroughly purged, inerted, flushed, and ventilated as necessary to ensure the elimination and/or control of all hazards which may cause entrant injury and/or illness.
- B. External Hazards: Pedestrian, vehicle, or other barriers are provided as necessary to protect entrants from external hazards.
- C. Verifying Acceptable Conditions: Conditions in permit spaces are tested and monitored throughout entry as necessary to ensure that they are acceptable for the duration of the authorized entry.

Confined Space Atmospheric Testing

Atmospheric testing is necessary to evaluate airborne hazards present in the permit space, and to verify that acceptable entry conditions are present.

Evaluation

Initial evaluation of the atmosphere of a confined space should be analyzed with a Safety Officer approved instrument that is sensitive enough and designed to evaluate hazardous atmospheres that may exist or arise. The results of the atmospheric testing will have a direct impact on the:

- Development of the entry procedure,

- Selection of PPE,
- Duration of worker exposure, or
- Whether an entry will be made at all.

The Environmental Health and Safety Office should be called for assistance with the evaluation and interpretation of the data, and the development of the entry procedure.

Verification

If the confined space contains an atmosphere that may be hazardous, it should be tested for residues of all contaminants that are identified.

Testing should be completed with equipment specifically designed to quantify that chemical or gas.

The results of these tests, and the time at which they were taken, should be recorded on the entry permit.

Each authorized entrant, or the entrant's authorized representative, shall be given an opportunity to observe any monitoring or testing of the permit space.

A space should be re-evaluated in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such re-evaluation because the entrant has reason to believe that the evaluation of that space may not have been adequate. Each authorized entrant should be provided with the results of the tests following re-evaluation.

Finally, when an entrant will be descending into a confined space, testing should be done every four feet in the direction of descent and to each side.

Measurement Duration

The measurement of each atmospheric parameter shall be made for at least the minimum response time of the test instrument specified by the manufacturer.

Stratified Atmospheres

The density of gases and vapors will cause them to be:

- Heavier than air, and settle to the bottom of a space (hydrogen sulfide),
- Light than air, and concentrate at the top of the space, (methane), or
- The same as air, and accumulate in the center, (carbon monoxide).

When monitoring for entries involving a descent into atmospheres that may be stratified, the space should be tested every four feet (4 ft.) in the direction of travel and to each side. The entrant's rate of progress should be slowed to allow for sampling and detector response.

Testing Procedures

1. Contact the Environmental Health and Safety Office or responsible designee to act as air monitor that has completed confined space training as well as training in the proper use of the monitoring equipment.
2. Use a Multi-Gas Monitor that has been calibrated within the past month and bump tested on the day of use. A copy of the manufacturer's operating instructions shall accompany equipment.
3. In a clean atmosphere, perform equipment check-out procedure or operational check as stated in the operating instructions.
4. If possible, draw an air sample through a hole leading to the space before opening the entry port. Otherwise, open the entry port and start sampling every 4 feet in the direction of travel and from side to side. It is recommended that the sampling time be twice (2x) the response time of the equipment.
5. Test atmosphere parameters in the ***following order*** (1. Oxygen 2. Flammability 3. Toxic.); DO NOT deviate from this required order (due to oxygen dependence of combustible gas meters):
Then, compare sampling results to the following acceptable entry conditions:
 - Oxygen level is below 19.5%
 - Oxygen level above 23.5%
 - Flammable gas levels exceed 10% of the Lower Flammable Limit (LEL)
 - Hydrogen sulfide (H₂S) above 10 ppm
 - Sulfur Dioxide (SO₂) above 2 ppm
6. Record sampling results on the entry form.
7. It is recommended that the following readings be taken:
 - Before ventilation
 - After ventilation
 - Initial entry survey
8. Contact Environmental Health and Safety should there be issues with atmospheric testing.

Confined Space Entry Procedures

The following procedures are required to ensure employee safety and compliance with OSHA's Confined Space Entry Standard.

Preparation

- Determine if entry into the space is necessary.
- Identify possible hazards and control measures.
- Perform initial atmospheric testing.
- Determine if work to be carried out could create a hazard in the space.
- Determine which Entry Level is required. (Non-permit or Permit Required).
- Identify equipment and PPE needed for entry.
- Document entry plan by completing a Confined Space Entry Permit.
- Assemble all equipment.
- Erect barriers around opening if necessary.
- Provide traffic control if necessary.

Non-permit Confined Spaces

Persons desiring to enter a non-permit confined space shall:

1. Inform their immediate supervisors of the confined space location and plans for entry.
2. Never work alone. Provide at least one attendant for the duration of the entry operations.
3. Have a means to summon assistance (cell phones, two-way radios, etc.)
4. Guard or barricade entry opening to protect the safety of personnel, pedestrians and motorists, if necessary.
5. Test the atmosphere prior to entry with a calibrated, direct reading instrument for a hazardous atmosphere.
6. Record air monitoring results on the Confined Space Entry Permit.
7. If a hazardous atmosphere is detected, the space must not be entered and the immediate supervisor must be informed as soon as possible.
8. Evaluate the space for engulfment, entrapment or any other serious safety or health hazards. If any of these hazards are found, this space must not be entered and a supervisor must be informed as soon as possible. If it is necessary to enter the space to eliminate hazards, such entry will take place only after following the full Permit-Required Confined Space Entry procedures. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.
9. Wear all required personal protective equipment (PPE) for the assigned task.
10. Be observant of the effects of hazardous contaminants and evacuate if any are detected,
11. When work is completed, return the space to original condition.

Permit Required Spaces

Persons desiring to enter a permit confined space shall:

1. Survey the confined space without entry and review the work to be performed. Identify any existing or potential hazards.
2. Determine if the work being performed will create a hazard in the confined space.
3. Eliminate the physical hazards, if possible, by:
 - Lockout/tagout all sources of energy (steam, electrical, mechanical)
 - Blanking and bleeding off pneumatic and hydraulic lines
 - Clean and/or purge any chemical storage vessel
 - Securing mechanically moving parts
4. Assign all entry team members a specific role to serve with instructions.
5. Determine communication between attendants and entrants.
6. Perform initial atmospheric testing.
7. Ventilate the space for a minimum of 5 minutes.
8. Resample atmospheric conditions. Confirm that acceptable entry conditions are present. If conditions are not acceptable, entry is not allowed.
9. Continually ventilate the space by pushing air so that a positive pressure changes the atmosphere over several times every hour.
10. The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of hazardous atmosphere.

11. Prior to entry in a confined space, an entry permit form shall be completed.
12. Identify required equipment and PPE for entry.
13. Assemble all equipment that is required for entry.
14. Erect barriers around opening, if necessary.
15. Provide Traffic control, if necessary.
16. Enter space and check for hazards that may not have been detected.
17. Under the following conditions, entrants must exit the confined space, re-evaluate hazards and modify entry procedures.
 - A hazardous atmosphere is detected after entry.
 - If any health or safety hazards develops which was not anticipated.
 - The attendant cannot effectively perform their duties.
 - The entrants are experiencing symptoms from heat stress or over exposure to atmospheric conditions.
18. When work is complete, return the space to original condition.

Note: Permits issued under the procedures in this program shall be limited in duration to no longer than eight hours.

Equipment Required

The following equipment should be included, but not limited to:

- Air monitoring equipment (Oxygen, Lower Explosive Limit [LEL], Carbon Monoxide [CO], Hydrogen Sulfide [H₂S], at a minimum).
- Communication Equipment
- Barriers and Shields
- Ingress and Egress Equipment
- Personal Protective Equipment
- Manhole Hook
- Forced Air Ventilating Equipment
- Traffic Control Equipment
- Fire Extinguisher
- First Aid Kit

Additional equipment required for PRS entries:

- Rescue body Harness
- Retrieval Life Line
- Retrieval Tripod with Personal Wrench
- Personal Air Monitoring Equipment

Note: All equipment shall be maintained and supervisors shall ensure that employees use the equipment properly.

Changes in Space Use or Configuration

When there are changes in the use and configuration of a non-permit confined space that might increase the hazards to entrants, the space is reevaluated and, if necessary, reclassified as a permit-required confined space. Any changes to a confined space should be communicated to the Environmental Health and Safety Office.

Confined Space Reclassification

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

If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed according to the confined space entry procedures. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as non-permit confined space as long as the hazards remain eliminated.

Such a reclassification must be documented on a Reclassifying Confined Space Form (see Appendix D) showing the hazards were eliminated. If the hazards arise within a permit space that has been declassified to a non-permit space, each employee must exit the space and the space is reevaluated to determine if it must be reclassified as a permit space.

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

Rescue and Emergency Services

Under no circumstances shall unauthorized personnel enter a confined space to attempt a rescue. At the present time there are no university employees authorized to perform a confined space entry rescue.

Offsite Emergency Services

The East Farmingdale Volunteer Fire Company, Inc. (EFVFC), located at 930 Conklin Street, East Farmingdale, NY 11735, is the closest emergency services resource; as such, and in the event of an emergency, the EFVFC can be contacted by dialing (631) 249-0047 from a cell/mobile phone or a campus landline.

Additionally, you may contact FSC University Police by one of the following methods:

- Cell/Mobile Phone: (934) 420-2111
- Campus Land Line: x2111 or 911

Lastly, in the event that onsite emergency services are required to perform a job or operation, advance arrangements can be made with Miller Environmental by calling (631) 567-6545. Likewise, in the event

of an unplanned or unexpected emergency rescue situation, and in addition to contacting the parties identified above, Miller Environmental can be called 24/7 at (800) 394-8606 for assistance.

Non-Entry Rescue

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.

- Each entrant shall use a body harness with a retrieval line attached. The other end of the retrieval line shall be attached to a mechanical device for any vertical permit-required space more than 5 feet deep.
- Wristlets are only used when a full body harness has been demonstrated infeasible or creates a greater hazard and wristlet use is the safest and most effective alternative.
- Retrieval lines are attached to a mechanical device or fixed point outside the space so rescue can begin immediately after the rescuer becomes aware that rescue is necessary.
- Mechanical devices are available to retrieve entrants from vertical type permit spaces more than 5 feet deep.
- If an entrant is exposed to a substance that is required to have a Safety Data Sheet (SDS), the information shall be given to the EMS personnel treating the entrant.

Training

Employees, including entrants, attendants, and entry supervisors, will be provided training to ensure they know the purpose and function of the Confined Space Entry Program, to ensure they possess the necessary skills and knowledge for their assigned duties, and to establish proficiency.

All entry supervisors, attendants, and entrants are properly trained initially, before being assigned duties requiring confined space entry, and will receive retraining periodically thereafter, specifically before a change in assigned duties, whenever permit space operations change and introduce new hazards, or when an evaluation indicates inadequacies in the employee's knowledge or use of procedures.

Training will ensure that all employees whose work is regulated by this program acquire the necessary understanding, knowledge, and skills to safely enter, work in, and exit from permitted spaces.

Requirements

Specific training shall be provided to each affected employee:

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

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

The supervisor shall certify that the training required has been accomplished. The certification shall contain each employee's name, signature or initials of the trainers, and training dates. The training certification is available for inspection by employees and their authorized representatives.

A list of trained employees with the dates and types of training they received will be maintained by Farmingdale State College's Environmental Health and Safety Office.

Program Review and Update

The Confined Space Entry Program will be reviewed or updated at least annually, or whenever there are new equipment or personnel changes that might affect the program.

The annual inspection will include:

- A review of employees' responsibilities under the Confined Space Entry Program; and,
- A physical inspection of the authorized employee(s) while performing confined space entry procedures to correct any problem areas identified; and,
- A physical inspection of Confined Space Entry equipment.

These inspections shall be performed by the Industrial Hygiene Officer, or authorized designee.

Compliance with the Program

All employees are required to comply with the restrictions and limitations imposed upon them during confined space entry. Employees who willingly and knowingly fail to adhere to this Confined Space Entry Written Program will automatically be subject to Farmingdale State College's disciplinary policy.

APPENDIX A

Confined Space Warning Signs with Unique Space ID's (examples)

CONFINED SPACE ENTRY POSTING

SPACE ID: _____1_____

ENTRY RESTRICTIONS:



DO NOT ENTER
without proper authorization.



**THIS IS A PERMIT-REQUIRED
CONFINED SPACE**



**CONTACT EH&S BEFORE
ENTRY**

- ☐ Entry only permitted with a valid confined space entry permit.
- ☐ All atmospheric testing must be conducted and documented prior to entry.
- ☐ Entrants, attendants, and supervisors must be trained and authorized.



**ENVIRONMENTAL HEALTH & SAFETY (EH&S): (934)420-5817
or (934)420-2017**



NON-PERMIT REQUIRED CONFINED SPACE



(Confined Space Entry Posting)

SPACE ID: _____ **11** _____

This space has been evaluated and determined to meet the criteria of a NON-PERMIT REQUIRED CONFINED SPACE under OSHA 29 CFR 1910.146.

Entry into this space DOES NOT REQUIRE A CONFINED SPACE ENTRY PERMIT, but entry should still follow safe work practices.

ENTRY REQUIREMENTS

- Maintain clear access to and from the space at all times.
- Do not introduce new hazards into the space.
(e.g., chemicals, welding, electrical, mechanical, etc.).
- Continuously monitor conditions within the space.
- Re-evaluate the space immediately if any conditions change or new hazards are introduced.
- Follow all applicable safety policies and procedures.

CONTACTS – Environmental Health & Safety (EH&S)

For questions or reclassification of this space, contact:

EH&S Office: (934) 420-5817

Physical Plant: (934) 420-2017

APPENDIX B

Identified Confined Spaces



US COMPLIANCE

Confined Space Assessment











for

Farmingdale State College
2350 Broadhollow Road
Farmingdale, NY











Assessment Date: May 20, 2025

CARE | PROTECT | GROW











Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Outside Space Team Required to Enter?	Is the space large enough and is so identified on drawings that a person could easily enter and perform assigned work?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous employee occupancy?	Is the space a Confined Space?	Does the space have a potential for hazardous atmosphere?	Does the space have the potential to engulf a person or to trap or asphyxiate?	Does the space have an identified potential for any other safety hazard, and if so, how is it controlled?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?					
Campus Center	1	Cooling Tower		Permit Required	NO	YES	YES	YES	YES	YES	YES		Atmospheric, Major Specific Configuration	YES	NO	NO	NO					
Campus Center	2	AHU 6 (44x1.50)		Permit Required	NO	YES	YES	YES	YES	NO	NO		Configuration	YES	NO	NO	NO					
Campus Center	3	AHU 4		Permit Required	NO	YES	YES	YES	YES	NO	NO		Configuration	YES	NO	NO	NO					
Campus Center	4	AHU 2		Permit Required	NO	YES	YES	YES	YES	YES	NO		Configuration	YES	NO	NO	NO					
Campus Center	5	AHU 3		Permit Required	NO	YES	YES	YES	YES	YES	NO		Configuration	YES	NO	NO	NO					
Campus Center	6	AHU 7		Permit Required	NO	YES	YES	YES	YES	YES	NO		Configuration	YES	NO	NO	NO					
Campus Center	7	AHU 8		Permit Required	NO	YES	YES	YES	YES	YES	NO		Configuration	YES	NO	NO	NO					
Campus Center	8	AHU 5		Permit Required	NO	YES	YES	YES	YES	YES	NO		Configuration	YES	NO	NO	NO					
Campus Center	9	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO		Configuration	YES	NO	NO	NO					
Campus Grounds (Fountain)	10	Fountain Pit		Permit Required	NO	YES	YES	YES	YES	YES	YES		Atmospheric, Electrical Configuration	YES	NO	NO	NO					











Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Outside Rescue Team Required to Enter?	Is the space large enough and is so confined that entry and exit is difficult or impossible without the aid of special equipment?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous employee occupancy?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to contain a flammable or combustible gas or liquid?	Does the space have an atmosphere that could become oxygen deficient?	Does the space have a potential for any other safety and health hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Quezon's Control	11	AHU		Not a Confined Space	NO	NO	YES	YES	NO							NO		NO				
Outside	12	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration, Height-Specific Hazard	YES	NO	NO	NO				
Outside	13	AHU 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration, Height-Specific Hazard	YES	NO	NO	NO				
Dewey	14	Access Tunnel 1		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric, Configuration, Visibility	YES	NO	NO	NO				
Dewey	15	Access Tunnel 2		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric, Configuration, Visibility	YES	NO	NO	NO				
Quezon	16	Steam Tunnel Entrance		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Visibility	YES	NO	NO	NO				
Quezon	17	Cooling Tower		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Height-Specific, Configuration	YES	NO	NO	NO				
Quezon	18	AC 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Quezon	19	AC 3		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Quezon	20	AC 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				











Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Circle Space if Team Required to Enter?	Is the space large enough and is so confined that entry and exit is difficult or impossible without special equipment?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (i.e. occupancy)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf or entrap or contain a flammable gas or liquid?	Does the space have an identified or potential for engulfment or entrapment?	Is there a potential for any other hazards during entry and maintenance?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Green	21	AC 5		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Green	22	AC 4		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Green	23	AC 2 Return (Return Previously)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Green	24	Exhaust 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Green	25	Shower Tunnel Entrance (Downflow)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric Configuration Thermal	YES	NO	NO	NO				
Green	26	AC 2 and Fan Access to Downflow (Near Cooling Tower Supply)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Green	27	AC 1 and Fan Access to Downflow (Cooling Tower Supply)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Green	28	AC 1 Return Fan		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Green	29	AC 1 Downflow (Between Supply and Return)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Green	30	Attic Space Above Return Fan 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Height Specific Configuration	YES	NO	NO	NO				

Confined Space Matrix

Space Identification																			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Outside Rescue Team Required to Enter?	Is the space large enough and is so confined that entry and exit is difficult or restricted?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant?	Does the space have an identified potential for any other serious safety and health hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?		
Greenery	31	Recreation Area 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Greenery	32	AC 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Greenery	33	Steam Tunnel Entrance		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO		
Hide	34	Steam Tunnel Entrance (Mechanical Room)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO		
Hide	35	Chiller 1		Not a Confined Space	NO	YES	NO	YES	NO						NO	NO	NO		
Hide	36	HV 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Hide	37	AHU 3		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Hide	38	F 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Hide	39	F2 Outwork		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		
Hide	40	AHU 4		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO		











Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Circle Space if Team Required to Enter?	Is the space large enough and is so confined that entry and exit could be difficult or hazardous?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (occupancy)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant or become trapped?	Does the space have an identified potential for stored or hazardous materials?	Does the space have an identified potential for any other safety and health hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Hall	41	AHU 4		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Hall	42	HV 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Health and Wellness	43	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Heating Plant	44	Steam Tunnel Entrance		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Configuration	YES	NO	NO	NO				
Heating Plant	45	Boiler 4		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Configuration	YES	NO	NO	NO				
Heating Plant	46	Boiler 3		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric Configuration Thermal Volatility	YES	NO	NO	NO				
Heating Plant	47	Boiler 2		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric Configuration Thermal Volatility	YES	NO	NO	NO				
Heating Plant	48	Boiler 1		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric Configuration Thermal Volatility	YES	NO	NO	NO				
Heating Plant	49	Housekeep		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				
Heating Plant	50	River Pt		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				











Confined Space Matrix

Location	Space Number	Space Identification		PHOTO REFERENCE	Permit Designation	Circle Space Team Required to Enter?	Confined Space Determination							Permit Required Confined Space Applicability					Records and Entry Procedures		
		Name of Space					Is the space large enough and is it so confined that entry and exit is difficult or hazardous?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (i.e. occupancy)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an employee or material in the space?	Does the space have any other safety and health hazards?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?			
Heating Plant	51	Steam Converter			Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Height, Spatial Hazards, Confined, Thermal, Volatility	YES	NO	NO	NO			
Heating Plant	52	Distillator			Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Confined, Thermal, Volatility	YES	NO	NO	NO			
Heating Plant	53	Expansion Tank 1			Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO			
Heating Plant	54	Expansion Tank 2			Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO			
Heating Plant	55	Boiler 3 Draft Fan			Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO			
Heating Plant L4	56	Sanitary Sewer			Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Biological, Configuration	YES	NO	NO	NO			
Horizon	57	Mechanical Access Tunnel, Plumbing			Non-Permit Required	NO	YES	YES	YES	YES	NO	NO	NO		NO	NO	NO	NO			
Horizon	58	AC 2			Permit Required	NO	YES	YES	YES	YES	NO	YES	YES	Configuration	YES	NO	NO	NO			
Horizon	59	AC 1 (Access)			Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO			
Horizon	60	AC 1 (Unit)			Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	Configuration	YES	NO	NO	NO			











Confined Space Matrix











Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Circle Space if Team Required to Enter?	Is the space large enough and is so configured that entry and exit are not readily made by the average person?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (occupancy)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to contain a hazardous atmosphere?	Does the space have an attendant could become trapped?	Does the space have a safe means of entry and exit?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Knap	61	Steam Tunnel Entrance (Overhead)		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric Configuration: Normal	YES	NO	NO	NO				
Knap	62	Steam Tunnel Inlet (Left Toward Knap, Right End Whittier)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric Configuration: Normal, Volatility	YES	NO	NO	NO				
Knap	63	AHU 2		Non-Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Knap	64	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lufkin	65	Steam Tunnel Entrance (Left Toward Knap, Right End Trenches)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Configuration	YES	NO	NO	NO				
Lufkin	66	Sprinkler Trench (Mechanical Room)		Permit Required	YES	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric, Height-Specific, Configuration, Volatility	YES	NO	NO	NO				
Lufkin	67	Lufkin Access Tunnel Leg 1		Not a Confined Space	NO	YES	NO	NO	NO							NO	NO	NO				
Lufkin	68	Main Room 2 Entrance		Not a Confined Space	NO	YES	NO	NO	NO							NO	NO	NO				
Lufkin	69	Overpass 1 (mech room 2)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lufkin	70	Overpass 2 (mech room 2)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				

Confined Space Matrix











Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Rescue and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Circle Space Team Required to Enter?	Is the space large enough and is so configured that entry and exit is difficult or hazardous?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (i.e. normal work)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant or become an in-pinch point?	Does the space have an identified potential for stored energy?	Is there a potential for any other hazards during entry and exit?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Luton	71	CrawlSpace 3 (near room 2)		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	NO	Configuration	YES	NO	NO	NO				
Luton	72	Steam Tunnel (Forward Room/Gentry)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Confined, Electrical, Visibility	YES	NO	NO	NO				
Luton	73	CrawlSpace 4		Not a Confined Space	NO	YES	NO	YES	NO							NO	NO	NO				
Luton	74	CrawlSpace 5		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Luton	75	CrawlSpace 6		Not a Confined Space	NO	YES	NO	YES	NO							NO	NO	NO				
Luton	76	CrawlSpace 7		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Luton	77	Midlevel Elevator Access Tunnel		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Luton	78	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Luton	79	AHU 5A		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Luton	80	AHU 3-5B		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				

Confined Space Matrix





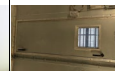



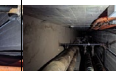

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Rescue and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Description	Outside Rescue Team Required to Enter?	Is the space large enough and is so confined that entry and exit could be difficult or impossible without proper equipment?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (work)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant or entrapment to entrapment?	Does the space have any other safety or health hazards?	Does the space have an identified potential for any other safety and health hazards?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Lupron	81	AHU 3-15		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lupron	82	AC 1		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lupron	83	RCD 5		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lupron	84	RCD 6		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Lupron	85	Chemistry Cooler		N/A a Confined Space	NO	YES	NO	YES	NO							NO	NO	NO				
Memorial	86	Mechanical Room (Refrigerated)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration Thermal	YES	NO	NO	NO				
Nod	87	AHU 3 (Above Breakwater Crane)		Permit Required	YES	YES	YES	YES	YES	NO	NO	YES	YES	Height Specific Hazards, Configuration	YES	NO	NO	NO				
Nod	88	AHU 1A		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Nod	89	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Nod	90	AHU 3		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	NO	Configuration	YES	NO	NO	NO				

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Circle Space Team Required to Enter?	Is the space large enough and is so confined that entry and exit is difficult or hazardous?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (work)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant?	Does the space have an identified or potential for an entrapment hazard?	Does the space have a potential for any other safety and health hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Node	91	AC 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Node	92	AHU 5 A		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Node	93	AHU 5 B		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Configuration	YES	NO	NO	NO				
Node	94	AHU 6		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Node	95	AHU 8		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Node	96	AHU 7		Non-Permit Required	NO	YES	YES	YES	YES	NO	NO	NO	NO		NO	NO	NO	NO				
Node	97	Mechanical Room 1 Pk		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric Configuration	YES	NO	NO	NO				
Node	98	AHU 2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Overhead	99	AHU 1		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				
Overhead	100	AHU 2		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				

Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Does this space have limited or restricted means of entry or exit?	Is the space large enough and is so configured that entry and exit is difficult or hazardous?	Does this space have limited or restricted means of entry or exit?	Is the space not designed for continuous employee occupancy?	Is this space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does this space have the potential to contain a hazardous atmosphere?	Does the space have an atmosphere that could become oxygen deficient or toxic?	Does the space have a potential for any other safety and health hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
Orchard	101	AHU 3		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				
Orchard	102	AHU 5		Not a Confined Space	NO	NO	YES	YES	NO							NO	NO	NO				
Orchard	103	Elevator Pit		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Quarantine	104	Steam Tunnel 1		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Confined, Vertical	YES	NO	NO	NO				
Quarantine	105	Condensate Discharge Chiller		Not a Confined Space	NO	YES	NO	YES	NO							NO	NO	NO				
Quarantine	106	Main Mechanical Room (Height and Restricted access)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Height-Specific, Configuration	YES	NO	NO	NO				
Quarantine	107	AHU 1 Main Mechanical Room		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
Quarantine	108	Steam Tunnel Entrance 2		Permit Required	YES	YES	YES	YES	YES	NO	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO				
School of Business	109	Cooling Tower		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	NO	Atmospheric, Configuration	YES	NO	NO	NO				
School of Business	110	AHU 1		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				

Confined Space Matrix

Space Identification				Confined Space Determination										Permit Required Confined Space Applicability					Records and Entry Procedures			
Location	Space Number	Name of Space	PHOTO REFERENCE	Permit Designation	Outside Rescue Team Required to Enter?	Is the space large enough and is so confined that entry and exit is difficult or hazardous?	Does the space have limited or restricted means of entry or exit?	Is the space not designed for continuous occupancy (i.e., work)?	Is the space a Confined Space?	Does the space have or contain a hazardous atmosphere?	Does the space have the potential to engulf an entrant or entrapment (i.e., is it a trap)?	Does the space have an identified or potential for an entrapment hazard?	Has the space been an identified or potential for an entrapment hazard?	Hazards	Permit required based on previous answers?	Rescue Equipment Available?	Rescue Procedures Established?	Entry Procedures Established?				
School of Business	111	AHU 1 (Pn)		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Atmospheric, Configuration	YES	NO	NO	NO				
School of Business	112	AHU2		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration	YES	NO	NO	NO				
School of Business	113	AHU 2 (Pn)		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric, Configuration	YES	NO	NO	NO				
School of Business	114	AHU 3 (Pn)		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	YES	Atmospheric, Configuration	YES	NO	NO	NO				
School of Business	115	AHU3		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	NO	Configuration	YES	NO	NO	NO				
Smart House	116	AHU (Under House)		Permit Required	NO	YES	YES	YES	YES	YES	NO	YES	NO	Atmospheric, Configuration	YES	NO	NO	NO				
Trucks	117	Trucks Cooler		Not a Confined Space	NO	YES	NO	NO	NO							NO	NO	NO				
Ward	118	Electrical Panel Access		Permit Required	NO	YES	YES	YES	YES	NO	NO	YES	YES	Configuration, Volatility	YES	NO	NO	NO				
Whitman	119	Steam Tunnel (Left)		Permit Required	NO	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO				
Whitman	120	Steam Tunnel (Right)		Permit Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	Atmospheric, Configuration, Thermal, Volatility	YES	NO	NO	NO				



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APPENDIX C

Confined Space Entry Check List and Permit

Confined Space Entry Check List and Permit

This checklist must be completed before entering any confined space. A confined space is defined as any area that:

- has limited or restricted means of entry or exit;
- is not designed or configured for continuous occupancy; and,
- is large enough for a person to enter to perform tasks;
- has the potential for a significant hazard to be present.

Space to be entered: _____ Name of Entry Supervisor: _____

Permit start date/time: _____ Expires date/time: _____

Purpose of entry/Work to be performed: _____

Preparation for entry (See written procedure for requirements)

Entrants, attendants, supervisor, contractors - all trained in confined space safety.	Done	NR
All have reviewed and understand entry procedure, especially anticipated hazards, acceptable entry conditions, emergency procedures.	Done	NR
Means to summon rescue established – (934) 420-2105 from mobile device, or X2111 from a landline.	Done	NR
Personal protective equipment (PPE) to be worn (circle): Gloves Glasses Boots Safety Harness/Lifeline Other: _____	Done	NR
All moving parts, augers, etc. are locked and tagged out. Electrical/ground fault hazards have been identified and locked out.	Done	NR
Flow of incoming material, including gases, <u>positively</u> controlled (i.e., pumps locked out, feedlines disconnected or blanked). Steam valves are not to be shut off from inside confined spaces.	Done	NR
Mechanical ventilation running prior to entry and continuously throughout.	Done	NR
Hot Work Permit completed and appropriate fire extinguisher provided.	Done	NR
Material Safety Data Sheet provided.	Done	NR
Street work rules being followed if required. Space barricaded.	Done	NR
Any other entry requirements (describe):	Done	NR

NR = Not required by procedure

Initial pre-entry atmospheric check <i>Person performing check signature:</i>		Readings	Acceptable
Instrument(s) used: Bump Test Performed: <input type="checkbox"/> Yes <input type="checkbox"/> No Calibrated: Calibration gas: Serial#:	Oxygen (O ₂):		19.5%-23.5%
	Hydrogen Sulfide (H ₂ S):		<10 ppm
	Carbon Monoxide (CO):		<25 ppm
	Sulfur Dioxide (SO ₂):		<2 ppm
	Lower Explosive Limit (LEL):		<10%

Note: If any of the gases above are not in the acceptable range the confined space is not to be entered.

Supervisor/Competent Person Authorization:

I have reviewed the relevant confined space entry procedure and verified that all necessary steps to prepare for entry have been taken. Permit will be terminated when work is complete or in the case that a hazard arises. I authorize this work to begin at this point.

Entry supervisor: _____ Date/Time: _____

Roster of entrants(s) authorized to enter space

Roster of responsible attendants

APPENDIX D

Reclassifying Confined Space Form

Reclassifying Confined Spaces

A permit required confined space may be reclassified as a non-permit-required confined space when (a) the space poses no actual or potential atmospheric hazards, and (b) all hazards within the space are eliminated without entry into the space. This reclassification is only valid as long as the space remains hazard free. If hazards arise within a non-permit-required confined space, employees in the space must exit immediately and the space must be re-evaluated.

Confined Space Identification & Location:			
Purpose of Entry:			
Authorized Duration of Permit:	Start Date:	Expire Date:	
	Start Time:	Expire Time:	

Pre-Entry Hazard Elimination Measures Taken

	Yes	No	NA
1. Hazardous contents/materials of the space removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Exposed electrical de-energized and verified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Lockout, tag-out and tryout procedures implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. All slip hazards eliminated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Space poses no actual or potential atmospheric hazards; or if there are potential atmospheric hazards, testing (oxygen, flammable vapors/gases and toxic concentrations) has been conducted and documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Passageway and access opening obstruction hazards eliminated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Sharp edges removed or guarded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Physical barriers or barricades installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Hazard Elimination Measure(s) Taken:

Steps Necessary to Identify Hazards That Develop During Entry:

Atmospheric Monitoring Results (If testing required for potential atmospheric hazards):

Agent	Limit	Test Results	Test Time	Tester's Initials
Oxygen	19.5% - 23.5%			
Flammables	< 10%			
H ₂ S	< 10 ppm			
CO	<25 ppm			

I certify that all hazards have been eliminated, that the confined space is safe to enter, and hereby reclassify the confined space as a non-permit-required confined space.

Print: _____ Sign: _____ Date: _____