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INTRODUCTION

A *confined space* is a space which:

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

A *permit required confined space* is a confined space, which has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere;
- Contains a material that has the potential for engulfing an entrant;
- 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
- Contains any other recognized serious safety or health hazard (i.e., electrical, mechanical, etc.).

In order to control and monitor entry into **ANY** identified confined spaces on campus, the Environmental Health & Safety Office shall require a Confined Space Entry Authorization for every entry into these spaces.

1.0 POLICY

SUNY Cobleskill is committed to providing a safe and healthful work environment for all employees. As a result the following written program has been developed to:

- Identify Confined Spaces on campus
- Identify Permit-Required Confined Spaces (PRCS)
- Establish procedures to prevent unauthorized entry into confined spaces
- Monitor the authorized entry in confined spaces
- Establish procedures to eliminate or control the hazards associated with PRCS operations including atmospheric hazards, entrapment hazards, engulfment hazards, mechanical hazards and electrical hazards

This policy has been developed based on guidance from the New York State Department of Labor to address the requirements of the Occupational Safety and Health Administration's (OSHA) Permit-Required Confined Spaces Standard, Title 29, Code of Federal Regulations 1910.146

2.0 RESPONSIBILITIES

2.1 Overall Program Responsibility

The Environmental Health and Safety (EH&S) Office is responsible for the overall implementation and maintenance of the written program and other requirements of the Confined Space Entry program at SUNY Cobleskill. This information shall be immediately available to employees and authorized employee representatives.

2.2 Permit-Required Confined Space Evaluation

The Environmental Health and Safety Officer (EH&S Officer) is responsible for evaluating the workplace to determine if any Confined Spaces are present. Additionally, the EH&S Officer is responsible for identifying the hazards associated with each particular confined space. If the identified hazards cannot be eliminated or effectively controlled prior to entry into the confined space then the space shall be subject to the full requirements of the OSHA (1910.146) Permit Required Confined Space standard.

2.3 Training

Training shall be given to each employee who has access or potential access to a confined space. The amount and type of training needed will depend on the individual's duty assignment. 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 confined space.

EH&S Officer is responsible for ensuring that affected personnel are properly trained including initial and refresher training. Employees requiring training include any authorized entrants, attendants, entry supervisors and on-site rescue team members. The Director of Facilities Management, Assistant Director of Facilities Management and Manager of the Grounds shall assist the EH&S Officer in identifying personnel that require confined space entry training.

2.4 Initial Contacting For Rescue Services

The EH&S Officer, the Assistant EH&S Officer, the Director of Facilities Management or the Assistant Director of Facilities Management shall ensure that rescue and emergency services have been informed of any Permit-Required Confined Space entrances and drills. Rescue service shall generally be provided by Cobleskill Fire and Rescue Department, Schoharie County HazMat Response Team and Schoharie County Cave Rescue Team.

2.5 Equipment

The EH&S Officer shall ensure that all equipment needed for safe entry into any confined space is available and in proper working order. Equipment includes:

- personal gas meter
- body harness
- retrieval tripod
- ventilator/blower
- portable air duct
- standard PPE (hard hats, safety goggles, protective clothing, etc)

With the exception of the standard PPE, the equipment shall be stored in the Bouck Hall

Addition 1st floor mechanical room. Employees are responsible for signing the equipment out of the storage space and reporting the working condition of the equipment.

3.0 CONFINED SPACE IDENTIFICATION

3.1 Locations and Hazards

The location(s) and potential hazard(s) posed by identified confined spaces are listed below:

Location	Hazard (s)
Boilers	<ul style="list-style-type: none"> • Atmospheric Hazards • Heat Related Hazards • Mechanical and Electrical Hazards
Bulk Milk Tank	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical Hazards
Catacombs Under Concrete Dorms	<ul style="list-style-type: none"> • Atmospheric Hazards • Entrapment Hazards
Crawl/Tunnel Space Under Greenhouses, Mackey Service Building and Curtis-Mott	<ul style="list-style-type: none"> • Atmospheric Hazards • Electrical Hazards • Heat Related Hazards
Ceiling Space Above Meat Laboratory and Fish Hatchery	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical and Electrical Hazards
Dairy Complex Separator Pit	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical and Electrical Hazards
Elevator Pits	<ul style="list-style-type: none"> • Mechanical and Electrical Hazards
Fuel Tanks	<ul style="list-style-type: none"> • Atmospheric Hazards <p style="text-align: center;">NO ENTRY BY CAMPUS PERSONNEL ALLOWED</p>
Manholes(asbestos containing)- Steam #1, 2, 3, 4, 5	<ul style="list-style-type: none"> • Respiratory Hazards • Heat Related Hazards • Atmospheric Hazards
Manholes (non-asbestos containing) – Steam, Sewer, Telecommunications, Electrical	<ul style="list-style-type: none"> • Atmospheric Hazards • Heat Related Hazards • Mechanical and Electrical Hazards
Open Excavations (> 4 ft. deep)	<ul style="list-style-type: none"> • Atmospheric Hazards • Engulfment Hazards • Entrapment Hazards
Sanitary Lift Station	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical and Electrical Hazards
Tanks- Condensate return, Hot Water Storage, De-aerating	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical and Electrical Hazards
Water Tower	<ul style="list-style-type: none"> • Atmospheric Hazards • Entrapment/Water Hazard
Water Tower Valve Pit	<ul style="list-style-type: none"> • Atmospheric Hazards • Mechanical and Electrical Hazards

3.2 Identification of additional confined spaces

Whenever confined spaces are identified at SUNY Cobleskill the EH&S Officer will inform affected or potentially affected employees of their existence and the potential hazards. The method(s) that will be used will be:

- Posting of danger signs at each permit space reading
"Danger -- Permit-Required Confined Space -- Do Not Enter"
- Review of existing and newly identified Confined Spaces at annual refresher training
- Updating this written plan to include newly identified spaces

3.3 Prevention Of Unauthorized Entry

All identified confined spaces shall be placarded "Danger -- Permit-Required Confined Space -- Do Not Enter". Employees entering a confined space without authorization and/or in violation of this written plan shall be subject to disciplinary action. Non-Employees may be subject to legal action.

3.4 Entry Authorizations

In order to control and monitor entry into **ANY** identified confined spaces on campus, the Environmental Health & Safety Office shall require a Confined Space Entry Authorization for every entry into these spaces. The individual authorizing or directing entry into the confined space shall be responsible for assuring that an Entry Authorization is issued before the space is accessed. Blank Confined Space Entry Authorization forms are available in the EH&S Office and in the Heating Plant.

Confined Space Entry Authorizations may be issued by:

- EH&S Officer
- Assistant EH&S Officer
- Assistant Director of Facilities Management
- Director of Facilities Management
- Plant Utility Engineer II
- Site Representative/Project Manager

The Entry Authorization shall include the following information:

- Location and description of work to be done
- Duration of work and expiration date of the permit
- Name of the individual issuing the permit
- List of authorized entrants and attendants
- Identification of hazards which may be present
- Acceptable atmospheric conditions
- Test equipment to be used
- Indicate the frequency of air monitoring required.
- Indicate whether ventilation of space is required.
- A checklist for isolating the space from mechanical/electrical hazards
- Personal protective equipment required to be on site and used
- Rescue equipment required on site
- Communications equipment required

- “HOT” work (welding, burning, cutting) that will be performed
- List any products authorized for use in the space. A copy of the MSDS Sheet for the product shall be attached to the permit.

The Authorization shall be posted at the entry site. Upon completion of entry the Authorization must be returned to the EH&S Office and shall be retained for one year.

3.5 Authorized Entry

An identified confined spaces shall not be entered by any employee or contractor until:

1. A Confined Space Entry Authorization has been initiated
2. Pre-entry hazard assessment has been completed
3. Specific Entry Procedures have been implemented (see Appendix A) when applicable
4. Appropriate rescue procedures have been established
5. Entry Requirements designated on the permit have been completed

4.0 PERMIT-REQUIRED CONFINED SPACE (PRCS)

4.1 Definition

A *Permit Required Confined Space* is a confined space, which has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- 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
- Contains any other recognized serious safety or health hazard (i.e., electrical, mechanical, etc.)

4.2 Eliminating or Controlling Hazards

Permit Required Confined Spaces that contain or have the potential to contain hazardous atmospheres or other hazards may be re-classified as *Non-Permit* spaces if the source of the hazardous atmosphere and all other hazards within the space are eliminated prior to and throughout the entire entry operation. The space may be isolated, purged or ventilated from the outside to achieve acceptable atmospheric conditions. Hazards within confined spaces may also be eliminated through the use of isolation and lockout/tagout procedures, blanking and blinding, double block and bleed procedures and line breaking.

At least 2 individuals must be present for authorized entry into a Non-Permit confined space. One of these individuals must remain outside of the confined space to summon assistance in the event of an emergency.

Ventilation Procedures

- Ventilation of a confined space may be required to displace steam, decrease space temperature, control atmospheric contaminants, prevent fire and explosion hazards or to attain/maintain acceptable atmospheric conditions. The blower, hose, and manhole saddle are stored in the Bouck Hall Addition 1st floor mechanical room. Employees are responsible for signing the equipment out of the storage space and reporting the working condition of the equipment.
- During use the blower shall be located at least 5 feet from the opening to the space.
- The hose output in the space shall be located in the bottom 1/4 of the space since most gases are heavier than air and settle in the lower levels of the space.
- Continuous ventilation shall be provided in any confined space where “Hot Work” is being done, when necessary to maintain acceptable atmospheric conditions or when indicated on the MSDS of the chemicals being used.

Lockout/Isolation/ Blanking

All equipment/utilities in the space or serving the space will be locked out or isolated prior to entry into any confined space. The confined space shall be completely isolated from all other systems by physical disconnection, double block and bleed, or blanking off all lines. Blanks used to seal off lines shall be capable of withstanding the maximum working pressure or load of the line (with a minimum safety factor of 4), be provided with a gasket on the pressure side to insure a leak—proof seal, and be made of chemically non—reactive material. Shutoff valves, serving

the confined space, shall be locked in the closed position and tagged for identification. In addition to blanking, pumps and compressors serving these lines entering the confined space shall be locked out to prevent accidental activation. If a drain line is located within the confined space it shall be opened and tagged. All actions taken to eliminate or control hazards shall be recorded on the Entry Authorization.

Electrical isolation of the confined space to prevent accidental activation of moving parts that would be hazardous to the worker is achieved by locking circuit breakers and/or disconnects in the open (off) position with a key-type padlock. The only key is to remain with the person working inside the confined space. If more than one person is inside the confined space, each person shall place his own lock on the circuit breaker. In addition to the lockout system, there must be an accompanying tag that identifies the operation and prohibits use. Mechanical isolation of moving parts can be achieved by disconnecting linkages, or removing drive belts or chains. Equipment with moving mechanical parts shall also be blocked in such a manner that no accidental rotation can occur. **Tagging alone is not an acceptable isolation means for work in confined spaces.**

4.3 Specific Entry Procedures

Specific Entry Procedures apply to *Permit Required Confined Spaces* that cannot be re-classified as non-permit spaces as set forth in section 4.2.

Specific Entry Procedures (see Appendix B) have been developed for each identified confined space at SUNY Cobleskill. These procedures specify the proper methods and equipment necessary to conduct an entry operation when a hazard condition cannot be eliminated or effectively controlled prior to the entry. Additionally, when the potential presence of hazard conditions cannot be determined without entering the confined space these procedures **MUST** be followed.

Specific Entry Procedures include:

- The methods used to prevent unauthorized entry.
- Method to identify and evaluate the specific hazards before entry.
- Procedures for the safe control of identified hazards such as isolation, purging, inerting, ventilation, barricades, lockout/tagout, etc.
- Procedures to test the permit space and document results.
- Procedures to maintain acceptable conditions in the permit space.
- Implementation of rescue procedures
- Establish a written system for preparation, issuance, use and cancellation of permits.
- Method to coordinate entry operations during multiple employer entries.

4.4 Personnel For Permit-Required Confined Space Entry Operations

Entry into a confined space where an identified hazard cannot be eliminated prior to entry shall be undertaken in accordance with the Specific Entry Procedures of the space. Such entry requires a specially trained and equipped team including:

- entry supervisor
- attendant
- authorized entrant

- rescue personnel

As set forth in Section 1910.146 (b) of the OSHA standard “An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this 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.”

4.5 Frequency of Training

Training must be provided:

- Before employees are assigned duties involving permit space entry.
- Whenever their assigned duties change.
- Whenever there is a change in a permit space that creates hazards for which they have not been notified.
- At least annual in the form of a refresher course

The EH&S Officer shall maintain a roster of all employees currently trained as Entry Supervisors, Attendants, Authorized Entrants and Rescue Team.

4.6 Training Agenda

Each member of the team shall receive initial and annual refresher training. The training shall be specific for the duties of each team member and include the procedures and practices necessary to protect them from the hazards of the permit space. At a minimum the training will include the National Safety Compliance “Confined Space Entry” training DVD and booklet or recognized equivalent.

The training program will include the duties of each team member as listed below:

Entry Supervisors

- Know the hazards associated with the permit space and their effects.
- Verify that the safeguards required by the permit have been implemented.
- Verify that rescue services are available and that means for summoning them are operable.
- Cancel the written permit and terminate the permit space entry when required.
- Remove personnel who are not authorized to enter the permit space during entry operations.
- Periodically, determine that the entry operation is being performed in a manner consistent with the requirements of the permit space entry procedures and that acceptable entry conditions are maintained.

Attendants

- Know the hazards associated with the permit space and their effects.
- Maintain an accurate account of the authorized entrants.
- Remain at their assigned station until relieved by another attendant or until the permit space entry is complete.
- Monitor conditions in and around the permit space.
- Summon rescue and applicable medical services in the event of an emergency.
- Perform non-entry rescue procedures.
- Perform appropriate measures to prevent unauthorized personnel from entering the permit space.

Authorized Entrants

- Know the hazards associated with the permit space and their effects.
- Properly use the equipment required for entry.
- Maintain a continuous means of communication with the attendant.
- Alert the attendant in the event of an emergency.
- Evacuate the space if an emergency occurs.

Rescue Personnel

- See Section 6.0 for the specific training elements for rescue personnel.

Additional Training Items

- Types of confined space hazards.
- Components of the written Permit Required Confined Space program.
- Components of the Entry Authorization system.
- Documentation of the elimination of the hazards
- Documentation of the Specific Entry Procedures
- Components of the hot work permit.
- The need for prompt guarding of the entrance opening.
- Atmospheric testing equipment including its use, calibration, and maintenance.
- Atmospheric testing protocol:
 - oxygen, combustibles, toxics
 - pre-entry, frequent or continuous testing
 - check all levels of the space
- Methods for the control or elimination of any atmospheric hazards:
 - Inerting
 - Draining and rinsing
 - Purging and cleaning
 - Continuous forced air ventilation
- Procedures the employees must follow if they detect a hazard.
- The evaluation process to be used for reentry if hazards are detected.
- Train employees on the use of entry equipment (e.g., ladders, communication devices, etc.)
- Personal protective equipment required:
 - full body harness
 - respiratory protection
 - chemical protective clothing
 - eye and face protection
- General Rescue Procedures:
 - Non-Entry vs Entry Rescues
 - Requesting rescue services
 - Rescue Plans
 - practice rescues
 - basic first-aid and cardiopulmonary resuscitation certification
 - full body harness with retrieval line attached to mechanical retrieval device
- Any other information necessary to ensure employee safety during a permit space entry operation.
- Procedures for canceling completed or expired permits

- Documentation of the training

5.0 CONFINED SPACE ENTRY BY CONTRACTORS

5.1 SUNY Cobleskill's Responsibilities With Contractors

Whenever contractors will be involved in confined space work on campus, the EH&S Officer, Assistant EH&S Officer, Director of Facilities Management, Assistant Director of Facilities Management or the Site Representative/Project Manager will inform them of the following information and coordinate all entry operations including issuance of the Confined Space Entry Authorization:

- The location of the confined space
- The identified hazards associated with the particular space.
- Process to obtain an Entry Authorization.
- Precautions that must be implemented to protect employees working in or near the space.
- Specific Entry Procedures for the space.
- Emergency response procedures
- Process for canceling a completed or expired permit

SUNY Cobleskill shall not allow any contractor to enter an identified confined space who has not been adequately trained in accordance with the OSHA 1910.146 standard.

If SUNY Cobleskill will have employees working in or near the space during the entry operation, the EH&S Officer, Assistant Director of Facilities Management or the Site Representative/Project Manager will coordinate entry operations.

5.2 Contractor's Responsibilities With SUNY Cobleskill

When a contractor is hired to perform work in a confined space on campus, the contractor shall obtain the following information from the EH&S Officer, Assistant Director of Facilities Management or the Site Representative/Project Manager.

- The location of the confined space
- The identified hazards associated with the particular space.
- Process to obtain an Entry Authorization.
- Precautions that must be implemented to protect employees working in or near the space.
- Specific Entry Procedures for the space.
- Emergency response procedures
- Process for canceling a completed or expired permit

The contractor shall provide written evidence that all contractor employees involved in the entry have been adequately trained in accordance with the OSHA 1910.146 standard.

The contractor shall advise the EH&S Officer, Assistant Director of Facilities Management or the Site Representative/Project Manager during or at the completion of the entry operation of any hazards that were encountered or created during their work.

6.0 RESCUE AND EMERGENCY SERVICES

6.1 Overview

The precautions and procedures outlined in this written plan are designed to ensure that SUNY Cobleskill and Contractor employees are protected from hazards while working in Permit Required Confined Spaces. The following rescue and emergency action plan has been developed in acknowledgement that unexpected situations may arise that prevents the entrant(s) from self-rescue.

SUNY Cobleskill will utilize:

- Non-Entry rescue services provided by campus personnel
- Non-Entry and Entry rescue services provided by Cobleskill Fire and Rescue Squad, Schoharie County HazMat Response Team and Schoharie County Cave Rescue

Non-entry rescue shall be the preferred method of rescue since it does not place the rescuer at unnecessary risk when removing the injured employee(s). Non-entry retrieval systems, such as full body harness with retrieval line, must be used whenever an employee enters a confined space, except in situations where the retrieval system would increase the risk of entry or would not contribute to the rescue.

N.B. Entry into any confined space in which the identified hazards have not been eliminated or effectively controlled shall require that the designated rescue team be on-site and ready to perform a rescue prior to the entry.

6.2 General Rescue Training

The Environmental Health & Safety Office will ensure that each member of the SUNY Cobleskill confined space rescue team is appropriately trained. (See Appendix C)

At a minimum the training shall include:

- Permit Space Recognition
- Permit Space Hazards
- Control of Permit Space Hazards
- Atmospheric Monitoring Equipment and Testing Protocol
- Use and Maintenance of Personal Protective Equipment
- Rescue Equipment
- Simulate Permit Space Rescues and Required Rescue Techniques
- Basic First Aid and Cardiopulmonary Resuscitation (CPR)
- Elements of Appendix C Rescue & Emergency Services

6.3 Basic First Aid and CPR

The Environmental Health & Safety Office will ensure that each member of the rescue service receives training in basic first aid and cardio-pulmonary resuscitation (CPR). At least one of the rescue team members must have current certification in first aid and CPR.

6.4 Simulated Rescue Training

The Environmental Health & Safety Office will ensure that rescue team members practice rescue techniques at least annually from actual or similarly configured space(s). Simulated rescue operations may utilize dummies, manikins, or individuals. Actual rescues during the 12 month period may also substitute for a practice rescue.

6.5 Rescue Services

The Environmental Health & Safety Office has made arrangements with Cobleskill Fire & Rescue Service, Schoharie County HazMat Response Team and Schoharie County Cave Rescue team for rescue and emergency services and they have consented to provide this service. Cobleskill Fire & Rescue Service, Schoharie County HazMat Response Team and Schoharie County Cave Rescue team are equipped for and proficient in performing the needed rescue services.

At least annually the Environmental Health & Safety Office shall provide the rescue services with access to the identified confined spaces in order to develop appropriate rescue plans and to practice rescue operations.

Name of Rescue Service: Cobleskill Fire & Rescue Service

Telephone: Number: 911

Location: Cobleskill village

Approximate Response Time: Less than 10 minutes

Name of Rescue Service: Schoharie County HazMat Response Team

Telephone: Number: 911

Location: Cobleskill; Richmondville; Schoharie; surrounding areas

Approximate Response Time: 20-30 minutes

Name of Rescue Service: Schoharie County Cave Rescue

Telephone: Number: 911

Location: surrounding areas

Approximate Response Time: 1 hour

N.B. Entry into any confined space in which the identified hazards have not been eliminated or effectively controlled shall require that the designated rescue team be on-site and ready to perform a rescue prior to the entry.

Rescue and emergency services may be contacted through the University Police Dept. (by 2 way radio or by phone at 518-255-5555) OR through Schoharie County 911 Dispatch (by phone at 911).

7.0 CONFINED SPACE PROGRAM REVIEW

This section shall apply to every entry into any confined space in which the identified hazards could not be eliminated or effectively controlled prior to the entry (Permit Required Confined Space). Every such entry requires that the Specific Entry Procedures for the space be followed and that the designated rescue team be on-site and ready to perform a rescue prior to the entry.

7.1 Frequency of Review

At least annually the Environmental Health & Safety Office will conduct a review of the confined space program using the cancelled Entry Authorizations. The purpose of the review is to identify any deficiencies in the program. The review shall be conducted sooner if there is reason to believe that the program does not adequately protect SUNY Cobleskill or contractor employees. If necessary the Environmental Health & Safety Officer shall meet with the employees to review a particular entry, discuss unusual or unexpected occurrences during the entry and to identify areas for improvements. Corrective measures will be documented by a revision of the program. Employees will be trained on any changes.



Confined Space Entry Authorization

THIS AUTHORIZATION MUST BE POSTED AT THE JOBSITE BEFORE AND DURING ENTRY.
AUTHORIZATION IS VALID ONLY FOR THE DATE INDICATED.

Location and Description of Space: _____

Purpose of Entry: _____

Authorization Start Date / Time: _____ / _____ End Date/Time: _____ / _____

Issuer of Permit: _____

HAZARD ASSESSMENT	Present	Not Present Or N/A	Date:	Time:
Permit Space Hazards				
Oxygen Enriched (>23.5%)			Atmospheric reading:	
Oxygen Deficient (<19.5%)			Atmospheric reading:	
Explosive or Flammable Atmosphere (>10% LEL)			Atmospheric reading:	
Toxic Gases or Vapors (CO >35ppm; H ₂ S >10ppm; other)			Atmospheric reading: Atmospheric reading: Atmospheric reading:	
Energized Equipment			Steps taken to prevent equipment from being energized:	
Electrical			How have energy sources been eliminated?	
Entrapment			How have entrapment hazards been eliminated?	
Engulfment			How have engulfment hazards been eliminated?	
Hazardous Chemicals			How was the hazard eliminated?	
Other			How was the hazard eliminated?	
NOTE: If ANY hazards are present then the SPECIFIC ENTRY PROCEDURES for that space must be followed <u>and</u> CONFINED SPACE ENTRY PERMIT (back of this sheet) must be issued. See the Environmental Health & Safety Officer or the Confined Space Written Plan for these procedures. A copy of the SPECIFIC ENTRY PROCEDURES must be attached to this permit. ***RESCUE TEAM MUST BE ON-SITE***	Equipment used to test atmosphere:			
	Date calibrated:			
	Atmosphere tested by:			

Emergency Procedure: University Police and/or Schoharie County Sheriff's Dispatch Center should be notified prior to entering the confined space. **IF AN EMERGENCY SITUATION ARISES, DO NOT ATTEMPT TO ENTER THE SPACE. CALL 255-5555 or 911 IMMEDIATELY FOR RESCUE SERVICES.**

CONFINED SPACE ENTRY PERMIT

<u>Entry Requirements</u>		
<input type="checkbox"/> Signs Posted	<input type="checkbox"/> Lockout/Tagout- Electrical	<input type="checkbox"/> Tripod Retrieval Unit
<input type="checkbox"/> Hot Work Permit	<input type="checkbox"/> Lockout/Tagout- Water	<input type="checkbox"/> Harness/life line
<input type="checkbox"/> Barricades	<input type="checkbox"/> Lockout/Tagout- other _____	<input type="checkbox"/> On-site Rescue Team
<input type="checkbox"/> Fire Extinguisher(s)	<input type="checkbox"/> Ventilation	
<input type="checkbox"/> Spark Resistant Lighting	<input type="checkbox"/> Respirator	
Personal Protective Equipment	<input type="checkbox"/> Self-contained Breath. Apparatus	
<input type="checkbox"/> Protective Clothing	<input type="checkbox"/> Periodic Atmospheric Testing at	
<input type="checkbox"/> Eye/Face Protection	_____ minute intervals: Record	
<input type="checkbox"/> Head Protection	readings on supplemental sheet	
<input type="checkbox"/> Other PPE _____		
<input type="checkbox"/> Other :		

Communication Methods

Visual Voice 2 Way Radio Cell

Communication Procedure:

Entry Supervisor:				
Confined Space Trained? Yes or No				
Authorized Attendant:				
Confined Space Trained? Yes or No				
Authorized Attendant:				
Confined Space Trained? Yes or No				
Authorized Entrants (list by name):	Time In	Time Out	Time In	Time Out
1.				
Confined Space Trained? Yes or No				
2.				
Confined Space Trained? Yes or No				
3.				
Confined Space Trained? Yes or No				

Additional Information (such as products or equipment to be used in the space):

Authorization By Entry Supervisor

I certify that all appropriate measures have been taken to provide safe entry to and work within this permit required confined space.

Signature: _____

Print Name: _____

Date: _____

Emergency Procedure: University Police and/or Schoharie County Sheriff's Dispatch Center should be notified prior to entering the confined space. **IF AN EMERGENCY SITUATION ARISES, DO NOT ATTEMPT TO ENTER THE SPACE. CALL 255-5555 or 911 IMMEDIATELY FOR RESCUE SERVICES.**

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Boilers:</u> Atmospheric Hazards, Heat Related Hazards, Mechanical and Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Open flue (chimney) to allow natural ventilation of the boiler. Without entering the boiler meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Flue open? Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Measure and record temperature of the space using the Bemis Temperature gauge provided by the Env. Health & Safety Officer. The temperature must be below 100 degrees Fahrenheit before entry and throughout the entry.	Temperature below 100° Fahrenheit?
Fuel feed (natural gas and fuel oil) to the boiler must be shut off and locked out.	LO/TO in place?
Lock Out/Tag Out all electrical service to the boiler.	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment including protective clothing, safety goggles, gloves, etc.	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Bulk Milk Tank</u>: Atmospheric Hazards, Mechanical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the tank meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Monitor and record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Milk feed line to the tank must be closed and locked out; tank drain must be open.	LO in place and drain open?
Lock Out/Tag Out all electrical service to the tank.	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment including protective clothing, safety goggles, gloves, etc.	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
Review MSDS of all chemicals or cleaning agents to be used in the tank	Precautions set forth in MSDS implemented?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Catacombs Under the Concrete High Rise Dorms:</u> Atmospheric Hazards, Entrapment Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the catacomb meter the atmosphere at the entry point using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. Without entering the catacomb meter the atmosphere at the outside access door using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the entry point and access door; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions at entry point verified and recorded? Acceptable atmospheric conditions at access door verified and recorded? Continuous monitoring by the entrant is required. Readings must be recorded at 15 minute intervals
If acceptable conditions at the entry point and/or the outside access doors are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Test all communication equipment	Equipment tested?
A lifeline must be utilized	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team Rescue team must include at least one Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA) certified rescuer.	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Catacombs Under the Concrete High Rise Dorms:</u> Atmospheric Hazards, Entrapment Hazards	
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Crawl Space/ Tunnel Space Under Greenhouses, Mackey Service Bldg and Curtis-Mott:</u> Atmospheric Hazards, Electrical Hazards, Heat Related Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Open other access points that will allow for increased natural ventilation of the space.	Access points open?
Without entering the space meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
Measure and record temperature of the space using the Bemis Temperature gauge provided by the Env. Health & Safety Officer. The temperature must be below 100 degrees Fahrenheit before entry and throughout the entry.	Temperature below 100° Fahrenheit?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment such as protective clothing, safety goggles, gloves, etc	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then <ol style="list-style-type: none"> 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry 	Permit issued? Combustible gas concentration verified?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Crawl Space/ Tunnel Space Under Greenhouses, Mackey Service Bldg and Curtis-Mott:</u> Atmospheric Hazards, Electrical Hazards, Heat Related Hazards	
Review MSDS of all chemicals to be used in the space	Precautions set forth in MSDS implemented?
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Ceiling Space Above Meat Laboratory and Fish Hatchery:</u> Atmospheric Hazards, Mechanical Hazards, Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the space meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levles less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Monitor and record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical & electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment including asbestos protective clothing, N100 filter respirator or supplied air respirator, safety goggles	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Review MSDS of all chemicals to be used in the space	Precautions set forth in MSDS implemented?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Dairy Complex Separator Pit:</u> Atmospheric Hazards, Mechanical and Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the separator meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. • Ammonia levels less than 35 PPM (PEOSH standard) 	Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Readings must be recorded at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use At Porter Lift Station the existing monorail hoist may be used in lieu of the tripod winching system.	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify) Review with entrant the symptoms of methane exposure which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Any symptoms require IMMEDIATE evacuation from the area.	Condition met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

Elevator Pits: Mechanical Hazards	
Routine entry into these areas for purposes of equipment inspection and adjustment only require Lock Out/Tag Out of mechanical hazards. All other work must follow the Specific Entry Procedures.	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Lock Out/Tag Out all potential mechanical & electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment such as protective clothing, safety goggles, gloves, etc.	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Review MSDS of all chemicals to be used in the space	Precautions set forth in MSDS implemented?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES
Fuel Tanks: Atmospheric Hazard

It is the policy of this college that no campus employee will be allowed entry into any fuel tank at any time.

Contractors must provide a copy of their fuel tank confined space entry procedure to the Environmental Health & Safety Office before entering the tank. At a minimum their procedure must include the following Specific Entry Procedures.

Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the separator meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. • Ammonia levels less than 35 PPM 	Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Readings must be recorded at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If “Hot Work” to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Manholes (Asbestos Containing) Steam Manholes #1, 2, 3, 4, and 5:</u> Respiratory Hazards (potential asbestos), Heat Related Hazards, Atmospheric Hazards	
NO PERSON MAY ENTER ANY MANHOLE WHILE LIVE STEAM OR WATER IS LEAKING FROM A BROKEN LINE OR FITTING.	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the manhole meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continue to monitor and record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
Measure and record temperature of the space using the Bemis Temperature gauge provided by the Env. Health & Safety Officer. The temperature must be below 120 degrees Fahrenheit before entry and throughout the entry.	Temperature below 120° Fahrenheit?
If ventilation is required to achieve acceptable atmospheric conditions or temperature conditions then the space is considered a potential asbestos hazard. The space may only be entered by an individual currently certified for N100 filter Respirator, Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA).	Entrant N100 Respirator, SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment including asbestos protective clothing, N100 filter respirator or supplied air respirator, safety goggles	PPE in use?
Verify readiness of rescue team	Rescue Team ready?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Manholes (Asbestos Containing) Steam Manholes #1, 2, 3, 4, and 5:</u> Respiratory Hazards (potential asbestos), Heat Related Hazards, Atmospheric Hazards	
NO PERSON MAY ENTER ANY MANHOLE WHILE LIVE STEAM OR WATER IS LEAKING FROM A BROKEN LINE OR FITTING.	
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Manholes (Non-Asbestos Containing) Steam Manholes, Sewer, Telecommunication, and Electrical Manholes:</u> Atmospheric Hazards, Heat Related Hazards, Mechanical and Electrical Hazards	
NO PERSON MAY ENTER ANY MANHOLE WHILE LIVE STEAM OR WATER IS LEAKING FROM A BROKEN LINE OR FITTING.	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the manhole meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continue to monitor and record readings at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Measure and record temperature of the space using the Bemis Temperature gauge provided by the Env. Health & Safety Officer. The temperature must be below 120 degrees Fahrenheit before entry and throughout the entry.	Temperature below 120° Fahrenheit?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
 SPECIFIC ENTRY PROCEDURES

<p><u>Manholes (Non-Asbestos Containing) Steam Manholes, Sewer, Telecommunication, and Electrical Manholes:</u> Atmospheric Hazards, Heat Related Hazards, Mechanical and Electrical Hazards</p> <p style="text-align: center;">NO PERSON MAY ENTER ANY MANHOLE WHILE LIVE STEAM OR WATER IS LEAKING FROM A BROKEN LINE OR FITTING.</p>	
Establish barriers to prevent entry	Barriers in place?
For Sanitary Sewer Manholes... Review with entrant the symptoms of methane exposure which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Any symptoms require IMMEDIATE evacuation from the area.	Condition met?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Open Excavations:</u> Atmospheric Hazards, Engulfment Hazards, Entrapment Hazards In accordance with Title 29, Code of Federal Regulations 1926.650-652 (Subpart P)	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
A Trench box or an approved shoring/trenching technique must be utilized.	Trench box or shoring/trenching in place?
For sanitary sewer excavations or excavations involving the manure handling system... Without entering the excavation meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continue to monitor and record readings at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Disconnect, blind out, lock out or isolate any pumps and feed lines which may allow contaminants to flow into the pit.	Task completed?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

Open Excavations: Atmospheric Hazards, Engulfment Hazards, Entrapment Hazards In accordance with Title 29, Code of Federal Regulations 1926.650-652 (Subpart P)	
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?
For Sanitary Sewer Excavations... Review with entrant the symptoms of methane exposure which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Any symptom requires IMMEDIATE evacuation from the area.	Condition met?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Sanitary Lift Stations:</u> Atmospheric Hazards, Mechanical and Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the lift station meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Readings must be recorded at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Disconnect, blind out, lock out or isolate any pumps and feed lines which may allow contaminants to flow into the pit.	Task completed?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use At Porter Lift Station the existing monorail hoist may be used in lieu of the tripod winching system.	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Tanks - Condensate return, hot water storage, de-aerating:</u> Atmospheric Hazards, Mechanical Hazards, Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the tank meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continuous monitoring is required. Record readings at 15 minute intervals
If acceptable atmospheric conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Measure and record temperature of the space using the Bemis Temperature gauge provided by the Env. Health & Safety Officer. The temperature must be below 100 degrees Fahrenheit before entry and throughout the entry.	Temperature below 100° Fahrenheit?
Lock Out/Tag Out all mechanical hazards in the tank.	LO/TO in place?
Lock Out/Tag Out all electrical service to the tank.	LO/TO in place?
Water feed line to the tank must be closed and locked out; tank drain must be open	Water line LO/TO and drain open?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment including protective clothing, safety goggles, gloves, etc.	PPE in use?
Verify readiness of rescue team	Rescue Team ready?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Tanks - Condensate return, hot water storage, de-aerating:</u> Atmospheric Hazards, Mechanical Hazards, Electrical Hazards	
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>WATER TOWER</u> : Atmospheric Hazard, Water/Entrapment Hazard	
If the water tower has water in it then absolutely NO entry by campus personnel is allowed.	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the tower meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continue to monitor and record readings at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out water valves to prevent the flow of water into the space	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then <ol style="list-style-type: none"> 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry 	Permit issued? Combustible gas concentration verified?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

Appendix B
SPECIFIC ENTRY PROCEDURES

<u>Water Tower Valve Pit:</u> Atmospheric Hazards, Mechanical Hazards, Electrical Hazards	
Specific Entry Procedure	Yes or No or N/A
Obtain Confined Space Entry Authorization.	Authorization issued?
Without entering the pit meter the atmosphere using the personal gas meter. Record atmospheric readings on Confined Space Entry Authorization. General standards for atmospheric testing: Always test oxygen level first; metering atmosphere for at least 2 minutes; meter at the top, middle, and lowest level of the space; Acceptable atmospheric conditions: <ul style="list-style-type: none"> • oxygen level greater than 19.5% by volume • oxygen level less than 23.5% by volume. • combustible gas concentrations less than 10% of the Lower Explosive Limit (LEL) of any combustible material existing in or introduced into the space. • hydrogen sulfide levels less than 10 PPM. • carbon monoxide levels less than 35 PPM. 	Acceptable atmospheric conditions verified and recorded? Continue to monitor and record readings at 15 minute intervals
If acceptable conditions are not met then ventilate the space and repeat atmospheric testing until acceptable conditions are met. Record all readings on Confined Space Air Quality Log sheet.	Acceptable conditions after ventilation?
If acceptable conditions are not met after ventilation then the space may only be entered by an individual currently certified for Supplied Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA)	Entrant SAR or SCBA certified?
Lock Out/Tag Out all potential mechanical and electrical hazards	LO/TO in place?
Test all communication equipment	Equipment tested?
Retrieval equipment (body harness; tripod; life line) ready for use	Equipment ready?
Personal Protective Equipment identified on the Entry Authorization utilized	PPE in use?
Verify readiness of rescue team	Rescue Team ready?
If "Hot Work" to be performed then 1. Hot Work permit must be issued and 2. combustible gas concentration of less than 10% of LEL must be re-verified immediately before entry	Permit issued? Combustible gas concentration verified?
Establish barriers to prevent entry	Barriers in place?
Other conditions (specify)	Conditions met?

Name of individual completing this sheet _____

Signature of individual _____ date _____

APPENDIX C - RESCUE AND EMERGENCY SERVICES

Confined space rescues are extremely dangerous operations that must only be performed by properly trained and equipped individuals. It has been well documented that the majority of fatalities that occur in confined spaces are would-be rescuers who have not been properly trained or equipped. For rescue operations to be conducted safely, there must be a systematic approach by the rescue service. In response, the OSHA Permit-Required Confined Space Standard (1910.146) mandates requirements which must be addressed for all on-site and off-site rescue personnel who will enter PRCS to perform rescue or retrieval operations.

Fire departments and other rescue service organizations are not required to have a full PRCS program in place for performing rescue operations. In arranging for rescue service SUNY Cobleskill has the responsibility to:

- 1) Inform the rescue service of the hazard(s) of the PRCS.
- 2) Provide access to the spaces so the rescue organization can develop a rescue plan and practice rescue operations.
- 3) Evaluate the prospective rescuer's ability to respond to a summons in a timely manner.
- 4) Evaluate the prospective rescuer's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit spaces or types of permit spaces identified.

Elements of Effective Rescue Operations

Preplanning

Determine the various types of permit spaces which are or are likely to be encountered by rescue team members.

Designate on-site command and control structure. Designate rescue team members' duties.

Develop SOP for the permit spaces likely to be entered.

Determine availability of appropriate rescue equipment, for example:

- Combination oxygen and combustible gas monitors
- Full-body harnesses
- Mechanical winch
- Reeves (collapsible) stretcher
- Stokes stretcher
- Communication equipment
- SCBA/SAR
- Ladders
- Personal Protective Equipment
- Explosion-Proof Lighting

Training

All members of the rescue team must receive training covering the following elements:

- Permit Space Recognition
- Permit Space Hazards
- Control of Permit Space Hazards
- Atmospheric Monitoring Equipment and Testing Protocol
- Use and Maintenance of Personal Protective Equipment
- Rescue Equipment
- Simulate Permit Space Rescues and Required Rescue Techniques
- Basic First Aid and Cardiopulmonary Resuscitation (CPR), one member of the rescue team

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must have a current certification for CPR and First Aid.

- Requirements stated in paragraph (k) and (g) of 1910.146

Standard Operating Procedures (SOPS)

Rescue organizations may use this information to develop their own SOPs.

- Initiate on-site command system
- Secure the area near the space and remove/control any potential hazards
- Review Confined Space Entry Authorization
- Review material safety data sheets (MSDS) for the chemical exposures.
- Determine number and condition of occupants in the permit space.
- Determine victim's immediate needs
- Initiate non-entry rescue procedure
- If entry is necessary, utilized Specific Entry Procedures for the space
- If victim is trapped and cannot be moved promptly:
 1. Provide air to the victim with SCBA or SAR (Rescuer must never remove their respirator face piece to administer fresh air to the victim)
 2. Oxygen cylinders must not be taken into a permit space if the oxygen could react with any substances in the space and create an additional hazard
- Provide necessary first aid/CPR and transport for medical care/evaluation.