CONFINED SPACE ENTRY PROGRAM

The following information details a confined space entry program and shall be followed in the event entry is required.

Introduction

Due to the potential for employees of Village of Lake George to work in a confined space, this program will provide direction and guidelines for these "permit" entry situations. The purpose of the program is to provide a safe method of entry and rescue procedures during routine and emergency situations involving confined spaces.

This program has been developed using the OSHA 1910.146 *Permit Required Confined Space Code of Federal Regulations*.

The Confined Space Permit Entry Program will establish procedures for the Village of Lake George employees during a confined space (permitted space) entry or rescue including:

- Evaluating potential confined spaces, which may required an authorized entry
- Permit preparation
- Identify the potential hazards of each permit entry confined space
- Provide hazard elimination or control measures for the hazard(s) in each space
- Notify owners/operators concerning permit entry hazards, control measures, and the requirements of the team's permit entry program
- Ensure the safety of confined space entrants
- Authorize, issue and cancel entry permits
- Exceed the compliance requirements of 29 CFR 1910.146 Permit-Required Confined Spaces For General Industry; Final Rule dated January 14, 1993

The Permit Entry Program will identify:

- Confined spaces requiring a permit to enter
- The specific hazards of such spaces
- The hazard control measures to be utilized
- Any other necessary safety measures
- Authorized Entrants
- Authorized Attendants (entry monitors)
- Entry Supervisors
- Program responsibility, record keeping, program evaluation and revision
- Acceptable entry conditions for each space
- Training requirements for all personnel involved in permit space entry

Program Responsibility

The trained competent person will ensure that the Permit Entry Program fulfills the purpose of ensuring the safety of personnel involved in permit entry operations.

The Safety Officer ("SO")—Reviews host employer confined space assessments and project-specific records. The SO also ensures that Attendants and Entrants are properly trained. Additional duties include:

- Confined space hazards assessments and training
- Confined space entry training
- The requirements of this permit entry program and record keeping
- Maintain entry permits for at least one year
- Conduct a program evaluation within 12 months of each entry or once every 12 months
- Maintain training records, medical and/or exposure records
- Program evaluation
- Review entry operations when there is reason to believe that protective measures may not adequately protect the safety and health of employees
- Review the Permit Program using canceled permits
- Revise the Permit Program as necessary

The Entry Supervisor—

- Reviews the Entry Permit and the entry conditions to ensure that necessary precautions have been implemented for the entrant's safety. The Entry Supervisor will then notify the Safety Officer (who may not be on-site) that a confined space entry will be taking place
- Will sign the Entry Permit authorizing the entry and ensure that entry permit conditions are maintained throughout the entry
- Terminate the entry and cancel the permit if permitted conditions change or when the planned entry activity is completed
- The Entry Supervisor may serve as an Attendant or Entrant as long as they are trained and equipped for each role he/she performs, as required by the Entry Permit.

The Entrant—

The Entrant will adhere to the requirements of the Entry Permit, remain in communication with the Attendant, be cognizant of the conditions inside the space, abide by the commands of the Attendant, and leave the confined space when:

- Ordered to by the Attendant
- Observes the effects of exposure to a hazardous atmosphere
- A non-permit condition exists

The Attendant—

Will monitor the conditions inside and outside the space, remain in communication with, and be cognizant of the condition and activities of the Entrant, and assist in an Entrant rescue, if necessary. The Attendant shall not enter the space to affect a rescue unless ALL the following conditions are met:

- Rescue personnel are on the scene
- He/she is properly relieved by another authorized Attendant
- He/she is properly trained as an Entrant
- He/she is properly equipped for rescue operations
- The Safety Officer has been notified

Retrieval Systems shall meet the following requirements:

- All equipment used shall be ANSI certified for confined space or fall protection
- Each Entrant shall use a chest or full body harness with the retrieval line attached at the center of the Entrant's back near shoulder level or above the head
- Wristlets may be used in lieu of the chest/full body harness, if appropriate. The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space
- MSDS information has been made available to the team with a review completed by the entry supervisor prior to any on-site activity

Entry Spaces and Hazards

The following spaces are identified, but not limited to, Permit Entry or Confined Spaces that might be encountered. This section will be utilized to prepare the Entry Permit to ensure that the potential hazards of the space are identified and controlled during entry operations:

<u>Feed/seed/particle Silos, Sewer or Water Entry Ports (manholes)—Potential Hazards</u>

- Atmospheric
- Oxygen, deficient or enriched
- Toxic
- Nuisance dust level
- Flammable/Explosive
- Physical
- Sloping bottom
- Rotating auger at bottom
- Slips/Falls
- Incoming material, engulfment or entrapment
- Side access only

<u>Hazard Control</u>

- Atmosphere testing

- Oxygen
- Flammability/explosivity
- Toxic substance
- Ventilation, if necessary
- Ladder
- Personnel Protective Equipment
- Safety harness/fall arrester
- Lock out/Tag out
- Personnel Training
- Permit Entry System
- Continuous atmosphere monitoring
- Adequate lighting

Acceptable Entry Conditions

- Oxygen content is 19.5-23.5 percent
- Flammable gas, vapor, mist concentration does not exceed 10% LEL upon entry, or 10% LEL during operations
- Concentrations of hazardous substances (OSHA Subpart Z, ACGI TLV or OSHA Subpart G substances) at or below permissible exposure limits (PEL) or Action Level for specific compound
- The atmosphere is not immediately dangerous to life or health (IDLH)
- Unobscured vision of at least five feet exists
- ALL energy sources have been locked out and energy has been released
- All personnel are properly trained and equipped
- Provisions are in place for an immediate rescue
- An Entry Permit has been authorized
- Adequate Lighting

Confined Space Entry Standard Operating Procedures

Atmosphere Testing

- When testing for atmosphere hazards, test for oxygen first, combustible gases and vapors second, and toxins and other hazards third. If sufficient oxygen is not available, the flammable/explosive and toxic readings will not be accurate.
- Sample for hazardous atmosphere before removing the access covers if possible. If this is not possible, open the space just enough to insert the probe and obtain a reading before the space is completely opened.
- For a vertical entry from the top of a confined space, sample for all atmospheric Potential Hazards at the top of the space, the middle of the space, and the bottom of the space or at intervals specified by HASP, conditions or the work plan.
- For vertical entry from the bottom of a confined space, reverse the order f sampling (bottom, middle, top).
- For a horizontal entry of a confined space, sample inside the opening, then using an extension to hold the remote sensor, sample the entire space to be entered.

- Record or report to a monitor the initial readings for oxygen, LEL and toxic substance(s) on the Permit.
- Record all meter alarm conditions on the Permit, after the confined space has been evacuated.
- If initial atmosphere monitoring indicates an unacceptable atmosphere (oxygen below 19.5% or above 23.5%, LEL above 0%, toxic substance above 0 PPM), the confined space will be ventilated with forced fresh air as specified and retested prior to entry to ensure an acceptable atmosphere. Record these results on the Permit
- If initial monitoring indicates an unacceptable atmosphere, continuous atmosphere monitoring will be conducted while any Entrant is inside the space.
- Any time a confined space is exited during an entry operation (for break periods, work discussions, etc.), the entry conditions will be re-evaluated for acceptability prior to re-entry.
- The Entry Supervisor and the Entrant will concur that entry conditions are acceptable prior to re-entry.

Ventilation

When ventilation of a confined space is necessary to eliminate atmospheric hazards, to provide air circulation for Entrant comfort or for any other reason, the following guidelines and precautions will be used:

- Fresh air (19.5-23.5% oxygen, LEL 0%) and free of contaminants will be forced into the space, preferably at the bottom of the space with the discharge near the top of the space.
- When ventilating a flammable or hazardous atmosphere, the electric motor will be placed in a non-flammable location (or an intrinsically safe unit will be used) and the fresh air ducted into the confined space. The discharge should be located in an area free of ignition sources, is uninhabited, and should be periodically monitored.
- After ventilating the space, stop the ventilator blower, wait ten minutes and re-test the space without the ventilation blower. If the atmosphere is still unacceptable, the entry will be re-evaluated to determine the cause for the unacceptable atmosphere and corrective actions taken. Self-contained breathing apparatus may be used if other hazards other than respiratory (i.e., skin exposure) have been resolved.
- If an acceptable atmosphere cannot be achieved, then the confined space will not be entered, and the permit will be cancelled
- The Entrant shall be removed at the slightest change in atmosphere readings, changes in Entrant behavior, or any condition in or near the space.

Fall Protection

Entering, exiting, or working in a confined space requires care. When entering or exiting a confined space with a vertical drop, a system of fall protection or a fall arresting device must be used.

When working in a confined space with a potential for a vertical drop from staging, a platform or other permanent or temporary fixture, fall protection will be used.

Rescue Procedure

- For all entries into the confined spaces described, the Entrant shall wear a full body harness and an attached lifeline, except in those confined spaces where an attached lifeline would pose an additional hazard.
- The necessary equipment to effect a rescue from the confined space will be in place at the entry to the confined space and immediately available.
- Whenever possible and feasible, the Entrant(s) will be attached, via a full body harness and lifeline, to a retrieval device.
- Should a rescue be necessary when these safeguards are in place, the Attendant will summon assistance. Assistance will consist of one qualified Attendant, one qualified Supervisor. Attendant or Supervisor will call 911and initiate fire and ems response.
- Under no circumstance will an employee enter the space to make a rescue.

Canceling an Entry Permit

- Unacceptable entry conditions.
- Conditions or activities not specified on the Entry Permit.
- A rescue of Entrant(s) from the space was necessary.
- Conditions outside the space which could adversely affect the entry (severe weather, loss of electrical power, an emergency not related to the entry, etc.).