

Polk County Wisconsin

CONFINED SPACE POLICY

Policy 501.C

Effective Date: 07-20-99

Revision Date: 00-00-00

POLICY STATEMENT

It is the policy of Polk County to only enter Type 1 confined space. Type 2 confined space shall be contracted to an approved supplier of such services.

The entry will be in conformance with the current laws, rules and regulations and accepted department policies. The governing standard will be Wisconsin Administrative Code ILHR31 Confined Spaces.

At any time should a Type 1 confined space turn into a Type 2 confined space, work will cease immediately, the area secured and an appropriate/qualified contractor contacted for completion.

This policy includes purpose, scope and application of the standard.

COUNTY CONFINED SPACE ENTRY PROGRAM

INTRODUCTION

The Department of Industry Labor and Human Relations (DILHR) defines a confined space as an environment which by design or construction has limited openings or entry and egress, has unfavorable natural ventilation, could reasonably be believed by the employer to have dangerous air contaminants or contain materials which may produce dangerous air contaminants, and is not intended for human occupancy.≡ Confined spaces include, but are not limited to, storage tanks, compartments of ships, process vessels, pits, silos, vats, de-greasers, reaction vessels, boilers, ventilation and exhaust ducts, manholes, sewers, tunnels, underground utility vaults, and pipelines, but do not include heating system tunnels and vaults.

Each year thousands of people are seriously injured and many die as a result of entering and working in confined spaces. Confined spaces are dangerous for many reasons, including hazardous atmosphere, engulfment potential, and entrapping design etc. Confined spaces have unfavorable ventilation and therefore can accumulate gas, vapor, dust, mist and fumes in great enough concentrations to be dangerous if inhaled, and may cause death. Flammable and combustible gases, vapors, dusts etc., may explode with an ignition source. Confined spaces with oxygen deficient atmospheres and oxygen concentrations of under 16% can cause

drowsiness and nausea. If the oxygen level falls to 12% you can lose consciousness, and 6% is fatal. When oxygen concentrations are above 23.5% the risk of fire and explosion can increase because oxygen accelerates the burning process.

The design of some confined spaces may create an engulfment or entrapment hazard. Liquids and solids that flow can drown or smother people. Also, some confined spaces are designed with steep walls that can trap people, etc.

PURPOSE

This policy establishes minimum occupational safety and health procedures for Polk County employees who may enter into and work in confined spaces.

SCOPE

This program applies to all places of employment and public buildings of the County and defines the County's policy in accordance with the Wisconsin Administrative Code ILHR 31, Confined Spaces. This code states that no employer may require an employee to enter or work in a confined space, unless it is in accordance with this standard.

APPLICATION

The Wisconsin Administrative Code ILHR 31, Confined Spaces, applies to all places of employment and public buildings of a public employer, whether existing prior to the effective date of this standard or subsequently established or built. It shall not apply to emergency rescue attempts performed by fire department personnel or police department personnel.

SAMPLING

No person may enter a confined space until the atmosphere of the confined space is sampled and the air quality is determined for all areas within the space.

The atmosphere of a confined space shall be sampled for:

- . Oxygen
- . Hydrogen sulfide
- . Combustible gas
- . Any toxic substance which an employee is expected to work with or likely to be exposed to and which, the employer has reason to believe may be present

Employers are responsible for informing employees about the toxic substances which they are expected to work with or likely to be exposed to. An employee may refuse to work with or be exposed to a toxic substance, until such time as an employer supplies the appropriate

information. An employee may not be disciplined for exercising this right.

CONFINED SPACE ENTRY

A confined space may NOT BE ENTERED unless the atmosphere of the confined space has:

- X An oxygen content of 19.5% or more
- X A hydrogen sulfide content of less than 10 parts per million
- X A combustible gas content less than 20% of the lower explosive limit, L.E.L.
- X An exposure level, for any toxic substance determined to be present, which is at or below the threshold limit value short term exposure limit for any substance specified by the American Conference of Governmental Industrial Hygienists in the publication entitled A Chemical Substance in the Work Environment.
- X A confined space with an atmosphere which is not within any or all of the limits may be ventilated and may be entered when sampling indicates an atmosphere within the limits.
- X A confined space with an atmosphere which cannot be brought within all limits for oxygen, hydrogen sulfide, or a toxic substance may be entered, if a self-contained positive pressure breathing apparatus or an air line respirator is used
- X A confined space with an atmosphere which is not within the limits specified for combustible gas may not be entered, even if a breathing apparatus or respirator is used.

ENTRY PROCEDURES

For the purpose of determining the specific entry procedures to be followed, a confined space which may be entered shall be classified as either LEVEL 1 or LEVEL 2, based upon the air quality and the source of possible contamination.

LEVEL 1

A Level 1 space shall be a confined space with an atmosphere within the limits specified and the only source of contamination expected or likely to affect the atmosphere is the employee=s presence or the employee=s activities.

LEVEL 2

A Level 2 space shall be a confined space with an atmosphere which falls within one of the following conditions:

- X The air quality is within the limits specified and the confined space contains sources of contamination other than the employee or the employee=s activities which may affect the atmosphere; or
- X The air quality is, or was at some time previously, not within any or all of the limits specified.

LEVEL 1 - ENTRY PROCEDURES:

Entry into or work in a Level 1 space shall be in accordance with:

- X The atmosphere within the employee=s immediate area shall be continuously monitored for oxygen, hydrogen sulfide and combustible gas while in the confined space.
- X Signals from the monitoring device shall immediately indicate when the atmosphere falls outside any of the air quality limits specified for oxygen, hydrogen sulfide, and combustible gas.
- X While in a confined space, if the air quality falls outside any or all of the limits for oxygen, hydrogen sulfide or combustible gas the employee shall exit the confined space, and the confined space shall be classified as LEVEL 2 space.

FORCED VENTILATION MAY NOT BE USED IN LIEU OF A MONITORING DEVICE.

LEVEL 2 - ENTRY PROCEDURES

Entry into or work in a Level 2 space shall be in accordance with the following:

- X The atmosphere within the employee=s immediate area shall be continuously monitored for oxygen, hydrogen sulfide and combustible gas while in the confined space.
- X Signals from the monitoring device shall immediately indicate when the atmosphere is not within any of the limits specified for oxygen, hydrogen sulfide, and combustible gas.
- X While in the confined space, if the air quality falls outside either or both of the limits specified for oxygen or hydrogen sulfide, the employee shall exit the confined space, except if equipped with a self-contained positive pressure breathing apparatus or air line

respirator.

- X While in a confined space, if the air quality falls outside the limit specified for combustible gas, the employee shall exit the confined space.
- X Forced ventilation may not be used in lieu of monitoring devices.

GENERAL ENTRY PROCEDURES

Except in a rescue attempt, no employee may enter a confined space without at least one employee stationed at the entrance of the confined space. A flag-man who is directing traffic may not serve as the employee stationed at the entrance.

Where entry to a LEVEL 2 confined space is by means of a manhole or a top opening, a winch shall be set up for rescue attempt prior to entry.

While in a LEVEL 2 space, an employee shall have voice or other means of communication with the employee stationed at the entrance of the confined space.

Body Harness

An employee entering vertically into a confined space shall wear a full body harness secured to a life line. The full body harness shall have a waist belt, shoulder straps, leg straps, and AD \cong ring or shoulder ring attached no lower than the shoulder blades. The life line shall be attached to the winch drum or secured by some other method.

An employee having to make horizontal movement into a confined space, such as in a sewer, or having to descent in such a manner that renders a winch useless for a rescue attempt shall be equipped with a self-contained positive pressure breathing apparatus or an air line respirator; and wear a full body harness having a waist belt, shoulder straps, and a AD \cong ring or shoulder rings attached no lower than the shoulder blades.

Stationed Employee

An employee who is outside of the confined space monitoring employees inside the confined space shall be equipped with at least one self-contained positive pressure breathing apparatus or air line respirator. Where an air line respirator unit is used, the unit shall be equipped with an escape air tank.

Rescue Attempts

An employee entering any confined space for a rescue attempt shall be provided with and wear a full body harness and a self-contained positive pressure breathing apparatus or air line respirator.

Communication shall be made for additional help before a rescue attempt is made into any confined space.

GENERAL SAFETY REQUIREMENTS (ILHR 31.07 WIS. ADM CODE)

Employees who are required to enter confined spaces shall be trained and equipped to recognize, understand and control air quality hazards that may be encountered in confined spaces.

An employer shall provide all employees who are required to enter confined spaces with a written confined space entry procedure, and the employees shall be trained according to the established procedures.

An employer shall provide a written standards operating procedure on the selection, use and care of the breathing apparatus, with proper employee training and fitting according to OSHA 1910.134 Respiratory Protection.

An employer shall provide training for all employees who are required to enter confined spaces in multi-media first aid and cardio pulmonary resuscitation.

Safety equipment such as, but not limited to, gloves, hard hats and protective clothing shall be provided by the employer and worn by employees entering a confined space.

No employee may smoke within 10 feet of a confined space.

Openings to confined spaces shall be kept clear of hand tools and debris.

Sampling devices and radios used in confined spaces shall be intrinsically safe for use in combustible atmospheres.

Self-contained positive pressure breathing apparatus to be used in confined spaces shall have at least a 30 minute air supply capacity. The escape air tank for an air line respirator to be used in confined spaces shall have at least a five (5) minute air supply capacity.

Entrances to confined spaces which are located in streets shall be guarded:

- X A vehicle beacon and 4-way flashers shall be activated upon approach to an entrance to a confined space.

- X A vehicle shall be parked in such a way that traffic flows in an unobstructed manner and where possible, the vehicle shall provide protection for the public employees.
- X A vehicle shall be parked in such a manner that exhaust fumes cannot accumulate in the confined space. If this is not possible, the vehicle's exhaust pipe shall be extended away from the confined space.
- X Before uncovering a manhole, traffic safety cones shall be placed around the manhole and any vehicle, and shall be visible to traffic in all directions. Cones shall be placed to protect the employees and to channel traffic flow. Cones shall be placed at distance and intervals in accordance with local traffic ordinances to adequately warn oncoming traffic.
- X In areas of high volume or other sites warranting additional warning devices, illuminated traffic arrows, barricades and warning signs shall be used around the entrance and any vehicle.
- X When placement of the vehicle creates a situation of having only one lane of traffic in high traffic volume areas, a flag man shall be used to direct traffic flow.
- X Traffic safety vests or equivalent shall be worn at all times when working on the street or easement surface in the field.