

Entrapment (Excavation, Machine)

A situation where a victim is entrapped by or in equipment or machinery and must be moved and/or rescued is an entrapment. This rescue involves locking out energy sources and extraction of the victim.

OSHA considers "entrapment" to occur in any space that "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". The key word in the previous sentence is "or". Use of the word "or" makes it clear that the intent of the standard is that "entrapment" can occur with or without an asphyxiation hazard.

Employees "entrapped" in spaces that do not pose an actual or potential asphyxiation hazard are still subject to injury or death. An employee "entrapped" in a permit required confined space could become dehydrated or if they suffered a cut while becoming "entrapped", they could bleed to death.

Updated

August 8, 2011

Source

Michigan Occupational Safety and Health Administration

Washtenaw County Technical Rescue Team

More Information

<http://www.michigan.gov/dleg/0,1607,7-154-11407---,00.html>

<http://www.wamaa.com/WCTRT/WCTRTframe.htm>

<http://www.oseh.umich.edu/pdf/guideline/guidcse.pdf>

http://www.oseh.umich.edu/pdf/guideline/loto_guideline.pdf

Prevention / Mitigation / Preparedness - Entrapment

Contact OSEH (734) 647-1143 for guidance and planning assistance. Refer to their Lock-Out/Tag-out Guideline for specific information regarding the following:

- Equipment shutdown procedures
- Locking and Tagging
- Tagging devices used & removal
- Release of stored energy and verification of de-energization
- Special requirements (compressed gasses or air, hydraulic energy, high voltage energy, etc.)

Provide adequate machine guarding on all mechanical equipment

Train employees on the specific equipment they will be working with and how to properly de-energize and lock it out.

Provide employees with locks, tags and other equipment necessary to conduct their work safely.

Ensure that inspections are conducted periodically (at least annually) by an Authorized Employee to assure the procedures outlined below are properly implemented and certify the inspections have been performed.

- Follow proper procedures whenever servicing or maintaining machines or equipment.
- Conduct assigned tasks in a safe manner, wear appropriate personal protective equipment, and only use equipment for which they have been formally trained.
- Report any job related injuries or illnesses, questions on health and safety, or any unsafe or unhealthy work conditions to the principal investigator/supervisor.
- Contact OSEH to evaluate health and safety conditions within their unit
- Assure that contractors comply with all applicable state and federal regulations as per the General Standard Conditions and contract specifications.
- Inform contractors of UM Lockout/Tag-out procedures where appropriate.

Regulation requires that procedures be developed, documented, and utilized for the control of potentially hazardous energy when employees service and maintain machines and equipment. The goal is to give the worker a clear understanding and exclusive control over the energy sources, so that accidental start up cannot occur

Response - Entrapment

Evaluate situation. **DO NOT ATTEMPT RESCUE IF YOU ARE NOT QUALIFIED TO DO SO.**

Well-meaning employees should not do anything that could further injure the victim or themselves.

Call 911 from a campus telephone and relay how many people are involved, the location and are there any injuries.

Designate an individual to meet the emergency responders and guide them to the affected area.

Activate your building response team program and establish a perimeter to the scene to keep on-lookers from wandering in and risking injury

In a structural collapse, evacuation will be needed. Assembly points will need the ability to take attendance to ensure all employees are accounted for.

If the incident involves an elevator/escalator, call POCC (734) 647-2059 as soon as possible.

Do not enter the affected area until it is cleared to do so by DPSS.

Retain any broken equipment for future claims purposes

Recovery - Entrapment

If the building has sustained damage contact Plant Operations (734) 647-2059 for assistance

Debrief with all parties involved in the response and recovery efforts to discuss strengths and weaknesses and what could have been done better

Keep everyone out of the affected area until it is deemed “all clear” and safe by authorities (DPSS, OSEH, etc.)

Contact the University Risk Management (734) 764-2200 so claims management and other insurance matters can be handled.

Follow Work Connections procedures if there is an accident or injury.
<http://www.workconnections.umich.edu/forms.html>.