

FIRE FIGHTERS GUIDANCE NOTE #6-16

ISSUE: MACHINERY/ELECTRICAL LOCKOUT DURING EMERGENCY RESPONSE

Fire departments may be called upon to perform rescue to entrapped person(s) in various forms of industrial machinery, elevators, etc.

Employers have duties under the *Occupational Health and Safety Act* (OHSA) including, but not limited to: acquainting a worker or a person in authority over a worker with any hazard in the work; providing information, instruction and supervision to workers; ensuring the equipment, materials and protective devices provided by the employer are maintained in good condition; and taking every precaution reasonable in the circumstances for the protection of a worker.

For the purpose of this Guidance Note, the term “lockout” refers to the methods, devices, and procedures for preventing the sudden and uncontrolled release of energy from a system, machine, or piece of equipment. Since energy is what a lockout system attempts to eliminate or control, it is important to identify all active potential sources of energy associated with the piece of equipment involved.

Main energy sources provide power to a system such as electricity, pneumatics, or hydraulics. Stored or secondary energy stays in the system after the main source is turned off. Stored energy includes electricity in batteries and capacitors, volatile chemicals in piping systems or pistons that move back and forth after the equipment’s power supply is turned off.

The following details should be considered when performing these operations:

- Fire departments should include lockout procedures in their SOPs/OGs
- Ensure that training in lockout procedures is given to those personnel that will perform rescue in any industrial machinery or energized electrical equipment
- Are there personnel on site who possess a greater knowledge of the machinery, and who can assist in locating shut-offs and disassembly of the machine?

- Isolate the energy supply by locating power sources and ensure that lockouts are performed. In energized electrical equipment, locate the main line and disconnect and perform a lockout. In pneumatic/hydraulic equipment, locate line shut-offs and perform lockout. In flowing liquid/solid applications, ensure that the block-outs are performed.
- Eliminate or neutralize energy reactors by use of chocks, wedges, blocking devices or elimination of secondary power where necessary.
- Assign personnel with a communications source (radio) to stand-by lockouts, to ensure that machinery power supply is not inadvertently turned back on.

References:

OHSA Clauses 25(1)(b), 25(2)(a), (d), and (h)

GN # 6-20 Electrical Hazards in Rescue and Fire Situations

GN # 6-32 Elevator Rescue

Electrical Safety Handbook for Emergency Responders – Best practices for Coping with Electrical Hazards in Rescue and Fire Situations, [Hydro One Networks Inc., Electrical Safety Authority, Office of the Fire Marshal, and Public Services Health and Safety Association], revised 5th Edition, 2013.

http://www.pshsa.ca/wp-content/uploads/2013/11/EELPWAEN0413-Electrical-Safety-Handbook_20131.pdf