

Lock-out Tag-out



Hazard Alert

HAZARD SUMMARY

An aquaculture worker was injured when the worker's clothing became entangled in a declumper, a piece of equipment used to separate mussels. The worker, who had only been at this workplace for four months, was cleaning the declumper for the first time. The worker did not shut off the machine while he was cleaning the paddles which were rotating on the inside. As the worker went to close the hatch of the declumper, the worker's coat got caught in the moving parts and began to twist, tightening the material of the coat around the worker's arm. A co-worker immediately ran to press the emergency shut-off switch. The worker was taken to the hospital with soft tissue injuries.

Hazard Location: Unguarded moving parts on mechanical equipment.

CAUSE

The following hazards were identified at the scene and may have contributed to the workplace injury:

- There was no control switch on the equipment to automatically de-energize, or shut the power off to the moving parts once they were no longer guarded.
- There was no Lock-out/Tag-out program in place at this workplace.
- The worker did not have adequate training and orientation to do the job he was asked to do.
- The worker was wearing loose fitting clothing while working around moving parts.



Figure 1. Declumper

LEGISLATED REQUIREMENTS

The following legislative requirements under PEI's *Occupational Health and Safety Act* General Regulations relate to this hazard alert:

- Section 30.6 (1) "The employer shall ensure that in addition to the normal control start and stop switch, all electrically driven machinery and equipment has installed in the power supply circuit a disconnecting means, which is (a) of a lockable type; (b) in a location familiar to all; and (c) properly installed."
- Section 30.6 (3) "The employer shall ensure that an employee has been adequately trained in lockout procedures for the particular situation."
- Section 30.8 (2) "Where an employee or the employee's clothing might come into contact with moving parts of machinery, the employee shall (a) wear close fitting clothing; (b) confine head or facial hair; and (c) avoid wearing dangling neckwear, jewellery, rings or similar items."



Figure 2. Declumper

To report a serious workplace incident or hazard,
call the 24hr OHS Emergency Line at 902-628-7513

- Section 30.7 (1) “Where machinery or equipment is shut down for cleaning, maintenance or repairs, the employer shall ensure that no employee carries out work on the machinery or equipment until that employee has:
 - a) locked out the source of energy using the safety lock and key that the employer must provide under section 30.6; and
 - b) put the machine in a zero energy state by ensuring that all
 - (i) power sources,
 - (ii) pressurized fluids and air,
 - (iii) potential mechanical energy,
 - (iv) accumulators and air surge tanks,
 - (v) kinetic energy of machine members,
 - (vi) loose or freely movable machine members, and
 - (vii) material or workpieces supported, retained or controlled by the machine which can move or cause movement, are
 - (A) locked out,
 - (B) vented to the atmosphere,
 - (C) reduced to atmospheric pressure, or
 - (D) otherwise acted upon to render the machinery incapable of spontaneous or unexpected action;
 - c) put on the control device of the machinery a tag which does not conduct electricity and which contains
 - (i) words directing persons not to start or operate the machinery,
 - (ii) the employee’s printed name and signature, and
 - (iii) the date when the tag was put on the machinery.

RECOMMENDED PRECAUTIONS

- De-energize all mechanical equipment before approaching unguarded moving parts. This can be done by installing a kill-switch or circuit breaker on guarding so that when the guarding is removed the equipment automatically shuts off.
- Use an effective Lock-out/Tag-out Program in all workplaces that have mechanical equipment. Educate and train all workers in the program and the procedures that are to be followed.
- Ensure that all workers have adequate orientation and training before starting a new task.
- Wear close fitting clothing or protective equipment, such as sleeve guards, to prevent clothing from becoming entangled in mechanical equipment.



Figure 3. Example of proper Lock-out Tag-out

FOR MORE INFORMATION

Visit the Workers Compensation Board website at www.wcb.pe.ca or contact the WCB Occupational Health & Safety Division at 902-368-5680 or 1-800-237-5049 (Toll free in Atlantic Canada).