ALGONQUIN COLLEGE | Occupational Health and Safety

HAZARD ISOLATION PROGRAM (LOCKOUT/TAGOUT)

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1.0 Purpose

The purpose of this program is to establish requirements for the control of hazardous energy during servicing, maintenance, repair, adjustment, or other activities where the unexpected start-up, energization, movement, or release of stored energy could cause injury.

This program establishes requirements for identifying hazardous energy sources, isolating and securing energy-isolating devices, controlling stored or residual energy, verifying isolation, and safely restoring equipment to service.

This program is intended to support compliance with applicable occupational health and safety legislation and to provide a consistent approach to hazardous energy control across Algonquin College.

1.1 Document Authority

This Program is established under the authority of Algonquin College Occupational Health and Safety and forms part of the College's Occupational Health and Safety Management System (OHSMS).

The Program supports the College's commitment to providing a safe and healthy workplace and learning environment and is developed in accordance with applicable occupational health and safety legislation, regulations, recognized standards, and College policies and procedures.

Where applicable legislation establishes a more stringent requirement than this program, the legislative requirements shall apply.

2.0 Scope

This program applies to all Algonquin College employees, contractors, and other persons who perform or may be exposed to hazardous energy during servicing, maintenance, repair, adjustment, cleaning, or other work involving machinery, equipment, systems, or processes.

The program applies where hazardous energy may be present, including electrical, mechanical, hydraulic, pneumatic, thermal, chemical, gravitational, pressure, or other forms of energy that could cause injury if unexpectedly released or restored.

Departments shall ensure that appropriate hazardous energy control measures are established and implemented for equipment and activities within their areas of responsibility.

Contractors performing work on behalf of the College shall comply with this program and applicable College requirements. Where contractor procedures are used, they shall provide protection that meets or exceeds applicable legislative and College requirements.

3.0 References

3.1 Legislation

- Occupational Health and Safety Act, R.S.O. 1990, c. O.1
- Ontario Regulation 851: Industrial Establishments, including applicable requirements related to:

- Section 42 – Electrical lockout and tagging requirements;
- Section 75 – Control of hazardous motion during cleaning, adjusting, repair, and maintenance; and
- Section 76 – Lockout and other precautions where machine start-up may endanger a worker.

3.2 Standards

- CSA Z460:20 (R2025): Control of Hazardous Energy – Lockout and Other Methods.

3.3 Guidance Documents

- Canadian Centre for Occupational Health and Safety (CCOHS) – Lockout/Tag Out
- Canadian Centre for Occupational Health and Safety (CCOHS) – Hazardous Energy Control Programs

3.4 Related Algonquin College Documents

This Program should be read in conjunction with other applicable College occupational health and safety programs, procedures, and standards, including but not limited to:

- Electrical Safety Program ES-01
- Machine Guarding Program MG-01
- Personal Protective Equipment Program PPE-01
- Contractor Safety Program, where applicable

4.0 Definitions

For the purpose of this program, the following definitions apply:

Affected Person – A person who operates or works in an area where machinery, equipment, or systems are subject to lockout/tagout but does not perform servicing or maintenance requiring hazardous energy isolation.

Authorized Person - A person who has been trained and authorized to perform lockout/tagout and is responsible for isolating hazardous energy before performing servicing, maintenance, repair, adjustment, or other work requiring energy control.

Energy-Isolating Device - A mechanical device that physically prevents the transmission or release of hazardous energy. Examples include circuit breakers, disconnect switches, valves, blocks, and similar devices.

Hazardous Energy - Energy that could cause injury if unexpectedly released, including electrical, mechanical, hydraulic, pneumatic, thermal, chemical, gravitational, pressure, or other forms of energy.

Lockout – The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, to prevent equipment or system from being energized or operated until the lockout is removed.

Lockout Device - A device used to secure an energy-isolating device in a safe or isolated position and prevent its operation.

Tagout - The placement of a prominent warning tag on an energy-isolating device to indicate that the equipment or system must not be operated until the tag is removed in accordance with the applicable procedure.

Zero-Energy State - A condition in which hazardous energy has been isolated, released, restrained, or otherwise controlled so that it cannot cause injury during the work being performed.

5.0 Role and Responsibilities

5.1 Senior Leadership

Senior leadership shall:

- Provide leadership and support for the implementation of this Program.
- Ensure appropriate resources are available to support this program.
- Promote compliance with applicable legislation, standards, and College requirements.

5.2 Managers and Supervisors

Managers and Supervisors are responsible for:

- Ensure hazardous energy control requirements are implemented within their areas of responsibility.
- Ensure workers who perform lockout/tagout are appropriately trained and authorized.
- Ensure appropriate lockout/tagout equipment and devices are available and maintained.
- Ensure equipment-specific hazardous energy control procedures are developed and maintained where required.
- Ensure affected persons are notified when equipment is removed from service or returned to service.
- Ensure contractors performing work within their area of responsibility comply with applicable College requirements.
- Address deficiencies identified through inspections, incidents, investigations, or other reviews.

5.3 Authorized Person(s)

Authorized persons shall:

- Complete required lockout/tagout training before performing lockout/tagout activities.
- Identify all hazardous energy sources associated with the work.
- Follow applicable equipment-specific hazardous energy control procedures.
- Shut down, isolate, lock out, and verify isolation before beginning work.

- Control stored or residual energy and prevent its release or re-accumulation.
- Apply and maintain their personal lockout device as required.
- Maintain control of their personal lock and key.
- Notify affected persons as required.
- Remove their personal lockout device when their work is complete, in accordance with the applicable procedure.
- Report deficiencies in lockout/tagout equipment, procedures, or controls to their supervisor.

5.4 Affected Person(s)

Affected persons shall:

- Follow instructions provided regarding equipment subject to lockout/tagout.
- Do not operate, attempt to start, or interfere with equipment that has been locked or tagged out.
- Do not remove or tamper with another person's lockout/tagout device.
- Notify their supervisor if they identify a concern involving equipment subject to lockout/tagout.

5.5 Occupational Health and Safety

The Occupational Health and Safety team is responsible for:

- Developing and maintaining this Program.
- Providing guidance on hazardous energy control requirements.
- Supporting departments in identifying and controlling hazardous energy hazards, as required.
- Supporting the development or review of hazardous energy control procedures where required.
- Providing or coordinating applicable training requirements.
- Monitoring implementation of the Program through inspections, consultations, incident investigations, or other activities.
- Supporting corrective actions and continual improvement.
- Reviewing and updating the Program in accordance with the College's program review requirements.

5.6 Joint Health and Safety Committee

The JOHSC shall:

- Participate in workplace inspections and consultations related to hazardous energy control.

- Review identified hazards and recommendations related to the implementation of this Program.
- Promote continual improvement of hazardous energy control practices.

5.7 Contractors

Contractors shall:

- Comply with this Program and applicable College requirements when performing work on College property.
- Implement hazardous energy control procedures that meet or exceed applicable legislative and College requirements.
- Coordinate hazardous energy control activities with the appropriate College representative before work begins.
- Ensure their workers performing lockout/tagout are appropriately trained and competent.
- Provide equipment-specific hazardous energy control procedures where required.
- Notify the College representative of any hazardous energy control concerns or changes that could affect College workers or others.

6.0 General Program Requirements

6.1 Hazardous Energy Control

Before servicing, maintenance, repair, adjustment, cleaning, or other work where unexpected energization, start-up, movement, or release of hazardous energy could cause injury:

- All hazardous energy sources shall be identified.
- Equipment shall be shut down and isolated from its energy sources.
- Hazardous stored or residual energy shall be released, restrained, blocked, or otherwise controlled.
- Energy-isolating devices shall be secured against operation.
- Isolation shall be verified before work begins.

6.2 Lockout/Tagout

- Lockouts shall be used where an energy-isolating device can be locked out.
- Each authorized person performing the work shall apply their own personal lockout device and appropriate tag in accordance with the applicable procedure. **See Appendix A – Lockout/Tagout Tag Sample**
- Lockout/tagout devices shall identify the person responsible for the device and shall not be removed or bypassed except in accordance with an established procedure.

- Affected persons shall be notified when equipment is locked out and before it is returned to service.
- Equipment-specific lockout procedures shall be developed, documented, and maintained where required to ensure all energy sources, insolation points, and necessary steps are clearly identified.
- Procedures shall identify the equipment covered, hazardous energy sources, isolation methods, steps required to control stored or residual energy, and the method used to verify isolation before work begins.
- Managers and Supervisors shall ensure required procedures are available to authorized persons before work is performed and are reviewed when equipment, processes, or energy control requirements change.

6.3 Verification

Before work begins, the authorized person shall verify that hazardous energy has been effectively isolated and that the equipment cannot be started or operated.

Where stored or residual energy may re-accumulate, controls shall remain in place, and verification shall continue as necessary.

6.4 Group Lockout and Shift Changes

Where more than one authorized person is performing work:

- Each person shall apply their personal lockout device to the group lockout system.
- Each person shall remove their lock when their work is complete.
- Equipment shall remain isolated until all required personal locks have been removed.

Where lockout continues between shifts, control of the isolation shall be transferred without compromising the locked-out condition.

6.5 Testing or Temporary Re-Energization

Where equipment must be temporarily re-energized for testing, positioning, or similar activities:

- **Step 1:** Clear personnel, tools, and materials from the hazard area.
- **Step 2:** Remove locks/tags in accordance with the applicable procedure.
- **Step 3:** Perform the required testing or positioning.
- **Step 4:** Shut down and re-isolate the equipment.
- **Step 5:** Reapply lockout/tagout before work resumes.

6.6 Removal of a Lockout Device

A personal lockout device shall normally be removed only by the person who applied it.

Where the person is unavailable and removal is necessary, the College shall follow a documented lock-removal procedure that includes verification that the person is not exposed to the hazard and notification of affected persons before the equipment is returned to service.

6.7 Return to Service

Before equipment or machinery is returned to service following lockout/tagout, the authorized person shall ensure that the work has been completed, and the equipment can be safely operated.

- Tools, materials, and other items shall be removed from the work area, and guards and protective devices shall be reinstalled where required.
- The equipment and surrounding area shall be inspected to confirm they are safe for operation.
- All persons shall be clear of the equipment and any associated hazards before energy is restored.
- Each authorized person shall remove their own lockout device in accordance with the applicable procedure, except where the documented lock-removal process in Section 6.6 applies.
- Affected persons shall be notified before equipment is returned to service.
- Equipment shall be re-energized and restarted in accordance with applicable procedures and manufacturer requirements.

7.0 Training and Education

Workers shall receive training appropriate to their role before performing work subject to this Program.

Authorized Persons shall receive training on:

- Identification and control of hazardous energy;
- Lockout/tagout requirements and procedures;
- Isolation and verification of hazardous energy;
- Control of stored or residual energy; and
- Applicable equipment-specific hazardous energy control procedures.

Affected Persons shall receive information appropriate to their role, including the purpose of lockout/tagout, recognition of lockout devices, and the prohibition against operating or interfering with locked-out equipment.

Training shall be reviewed and refreshed as required based on changes to equipment, procedures, hazards, responsibilities, or where deficiencies indicate additional training is required.

8.0 Documentation

Documentation supports the implementation, administration, and continual improvement of this program. Records required under this program shall be created, maintained, retained, and

disposed of in accordance with applicable legislation, College procedures, and record retention requirements.

- Documentation required under this program shall be maintained in accordance with applicable legislation and College procedures.
- Documentation shall be accurate, current, and readily accessible to authorized individuals, where required.
- Records shall be retained in accordance with applicable College record retention requirements.

Documentation may include, where applicable:

- Equipment-specific hazardous energy control procedures;
- Lockout/tagout records;
- Lock assignment records;
- Training records; and
- Records associated with inspections, incidents, investigations, or program reviews.

9.0 Program Review

This program shall be reviewed periodically to ensure it remains effective, current, and aligned with applicable legislation, recognized standards, College operations, and organizational objectives. Program reviews support the continual improvement of the College's Occupational Health and Safety Management System.

The program shall be reviewed following:

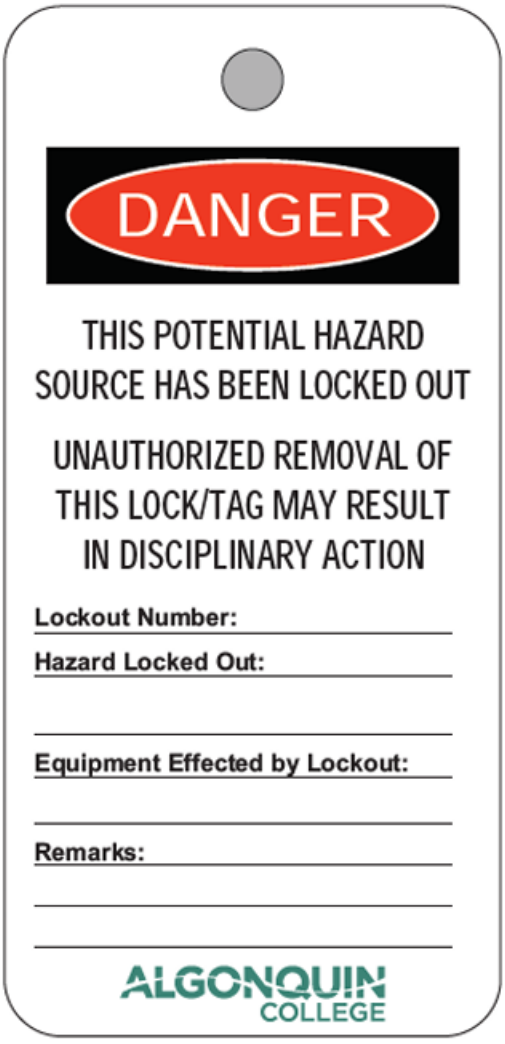
- Significant legislative or regulatory changes;
- Changes to applicable standards;
- Significant changes to College operations, equipment, or hazardous energy control requirements;
- Incidents, investigations, inspections, audits, or other findings that identify a need for revision; or
- Other circumstances identified by Occupational Health and Safety.

10.0 Appendices

Appendices provide supporting guidance, tools, templates, and reference material to assist with the implementation of this program. Appendices do not establish additional program requirements but are intended to support the consistent application of the requirements outlined in this document.

10.1 Appendix A – Lockout/Tagout Tag Sample





Actual LockOut/TagOut tags may vary