Lock Out Procedures Electrical or Machinery

Electrical Distribution Systems Code of Practice

LOCKOUT PROCEDURES
ELECTRICAL OR MACHINERY

July 11, 1996

1. GENERAL

University of New Brunswick Saint John Physical Plant has adapted the following procedure for "**LOCKOUT OF ELECTRICAL AND MECHANICAL INSTALLATIONS**".

This procedure is supplementary to UNB Safety Policy #7810/7811, for **Lockout of Electrical Installations or Machinery**, equipment which is electrically energized or which contains stored energy - electrical, mechanical, heat, pressure, or chemicals can release this energy and cause serious injury. To prevent accidental release of this energy, all persons maintaining or servicing such equipment shall bring this equipment to **"Zero-energy"** state before servicing or maintaining. In zero energy state, there is no residual energy that can be released.

This policy does not apply to electrical testing which requires the installation to be energized. Working on energized electrical installations of any type shall be performed by qualified electricians only.

Routine visual inspections of machinery which shall not expose personnel to abnormal hazard or injury are not covered by this policy.

PROCEDURES

No Employee or Contractor shall undertake any work on equipment unless the equipment is in a zero energy state. (ie. Lockout - except as previously stated.)

1. Prior to beginning work on any equipment that has the capability to startup, move or release stored energy, the Employee or Contractor will contact Physical Plant to request that the equipment be locked out and placed in a zero energy state.

2. Equipment in lockout state shall be isolated from all energy sources by being locked out, blocked, supported, retained, controlled, drained to tank, vented to atmosphere, reduce to atmospheric pressure or otherwise released of all potential energy.

3. A lockout shall be installed on any equipment to be worked on, first by a competent employee who will isolate equipment from all energy sources and will verify that it is isolated before work begins. Any other person working on this equipment shall install their own personal lock before commencing to work. Personal locks shall be permanently identified with the employee's initials.

4. A safety tag shall be installed on each lock. The tag will have the person's name, signature, date and time the tag was installed.

5. No person shall remove a locking device or a safety tag on equipment except for:

   a. ***The person who installed it.***
   b. ***In an emergency or where reasonable attempts are made to contact the person, indication that the person is not available, agreement of two competent employees designated by the Employer.***
   c. ***Area has been inspected to ensure No persons will be endangered by re-energizing.***

6. All personal locks shall be removed when that person is finished for the day except for mechanical and electrical if the work is not completed or equipment is not ready for service.

7. Equipment or installations being returned to service shall have all isolating devices removed except for electrical. The electrical lockout shall be the last device to be removed and only when it is safe to return equipment of installation to service.

UNIVERSITY OF NEW BRUNSWICK
SAINT JOHN CAMPUS

ELECTRICAL DISTRIBUTION SYSTEMS
CODE OF PRACTICE

May 4, 1998

1. GENERAL

All work on components of Electrical Distribution Systems must be performed by a Licensed Class 3 Electrician or qualified technicians. All components must be de-energized. ie. Isolated and grounded before any work commences. UNB Lockout Procedure must be adhered to.

2. PROCEDURES

All voltage carrying components of a Distribution System including MCC'S and switchgear must be de-energized before work proceeds. In a high voltage installation, cables and energized components of switch gear shall be de-energized before handling cables or access to components.

Electrical Distribution System shall be de-energized by using the existing one line electrical drawings to understand the loop distribution system on this Campus.

All distribution equipment shall be tested for voltage before any procedures are initiated. 750 volts or less can be tested for voltage using approved meters. Systems over 750 volts require the use of a approved voltage tester and approved protection gear. ie. Voltage rated gloves and cover gloves. Tester to be used in conjunction with an approved "Hot Stick" to maintain 600mm clearance from possible current carrying components.

2. PROCEDURES (CONTINUED)

Lock-out of Distribution Equipment - Low voltage, 750 volts or less, shall be locked out at the low voltage Distribution Panel Board as per UNBSJ Lockout Procedure. High voltage , 750 volts or more shall be locked out based on units and/or components to be worked on. To service equipment or cables in one area may require that system isolation occur in 2 different buildings other that being worked on. The existing switch gear key inter-lock system shall be used when working on components, so equipped, in conjunction with requirements of UNBSJ Lockout Procedure.

Grounding of Equipment - All High Voltage Distribution Systems shall be isolated and grounded before any work is started. Components shall remain grounded until all work is completed and system is ready to be re-energized. High voltage protection gear may be removed once components are grounded.

All planned Power Outages on the Distribution System will have advance notification. Unplanned outages will occur. In either case, all persons who work on equipment or installations shall follow the "Lockout" Procedure, whether a system is energized or not.

The Electrician in charge shall inspect all work areas affected by power outage before system is re-energized. The lockout will be removed by the electrician in charge only.