OKLAHOMA CITY COMMUNITY COLLEGE

CONTROL OF HAZARDOUS ENERGY PROGRAM

Environmental Health and Safety

Established:

Developed in accordance with OSHA Standard
29 CFR 1910.147
1.0 **SCOPE.** Oklahoma City Community College’s (“OCCC”) Control of Hazardous Energy Program (“Program”) specifically describes the purpose, authorization, rules and work practice procedures to be utilized by OCCC employees to guard against the unexpected energizing, start-up or release of stored energy that could cause injury. The Program applies to all employees engaged in the servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machines or equipment, or release of stored energy could cause injury to the employee. All employees affected by the Program are responsible for becoming familiar with the contents of the Program and ensure compliance with its procedures. Department supervisors are responsible for training employees within their respective department on the contents of the Program and ensure maintenance of training records.

2.0 **PURPOSE.** The Program has been established to ensure OCCC is capable of protecting employees from workplace injuries due to unexpected energizing, start-up or release of stored energy and to establish procedures for affixing appropriate lockout or tagout devises for energy-isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy. The Program is intended to meet the requirements of the Occupational Safety and Health Administration’s (“OSHA”) 29 CFR 1910.147, control of hazardous energy (“Lockout/Tagout”).

3.0 **DEFINITIONS.** For purposes of the Program the following definitions apply:

3.1 **Affected employee.** An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

3.2 **Authorized employee.** A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee’s duties include performing servicing or maintenance covered under the Program.

3.3 **Energy source.** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

3.4 **Lockout.** The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

3.5 **Lockout device.** A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment.

3.6 **Normal production operations.** The utilization of a machine or equipment to perform its intended production function.

3.7 **Primary authorized employee.** The authorized employee vested with responsibility for a determined number or group of employees performing service or maintenance on machines or equipment subject to lockout or tagout procedures.

3.8 **Servicing and/or maintenance.** Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying and maintaining and/or
servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

3.9 **Tagout.** The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

3.10 **Tagout device.** A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

4.0 **RESPONSIBILITIES UNDER THE PROGRAM.**

4.1 **Supervisor responsibilities.**

4.1.1 Review periodically and recommend revisions, if necessary, of the Program;

4.1.2 Ensure employees affected by the Program understand and follow policies and procedures as outlined in the Program;

4.1.3 Implement the Program and ensure employees under their supervision are trained in accordance with the policies and procedures established.

4.2 **Employee responsibilities.**

4.2.1 Attend required safety training sessions;

4.2.2 Follow safety guidelines applicable to the procedures set forth in the Program.

5.0 **GENERAL INFORMATION.** All departments utilizing the Program will establish and document site-specific procedures for energy isolation. Each department must procure and maintain within the department specialized lockout devices for use under the Program. If an energy-isolating device is capable of being locked out, the authorized employee will use lockout, unless the authorized employee’s immediate supervisor or his/her designee can demonstrate that utilization of a tagout system will provide full employee protection. When a tagout device is used on an energy-isolating device that is capable of being locked out, the tagout device must be attached at the same location that the lockout device would have been attached. Lockout devices used for the implementation of the Program must be accompanied by a standard tag. These devices will be used for no other purpose than lockout, and must be substantial enough to prevent removal without the use of excessive force or unusual techniques. Tagout devices, including their means of attachment, must be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means must be of a non-reusable type, attachable by hand, self-locking and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie. The Assistant Director of Facilities Management will conduct annual inspections of the energy control procedures and certify that the procedure and the requirements of the Program and 29 CFR 1910.147 are being followed.
6.0 TRAINING AND COMMUNICATION. OCCC provides training to ensure that the purpose and function of the Program are understood by employees and that the knowledge and skills required for the safe application, usage and removal of the energy controls are acquired by employees. Training includes the following:

6.1 Each authorized employee must receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace and the methods and means necessary for energy isolation and control;

6.2 Each affected employee must be instructed in the purpose and use of the energy control procedures;

6.3 All other employees whose work operations are or may be in an area where energy control procedures may be utilized, must be instructed about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out;

6.4 Retraining will be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or process that presents a new hazard or when there is a change in energy control procedures. Retraining must establish employee proficiency and introduce new or revised control methods and procedures as necessary. Supervisors or his/her designee will certify that employee retraining has been accomplished and is being kept up-to-date. The employee’s name and dates of training must be included in the certification.

7.0 TAGOUT SYSTEMS. If tagout systems are used employees must be trained as stated above and on the following limitation of tags:

7.1 Tags are essentially warning devices affixed to energy-isolating devices, and do not provide the physical restraint on those devices that is provided by lockout;

7.2 When a tag is attached to an energy-isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored or otherwise defeated;

7.3 Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective;

7.4 Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace;

7.5 Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program;

7.6 Tags must be securely attached to energy-isolating devices so that they cannot be inadvertently or accidentally detached during use.

8.0 PROCEDURES. Implementation of the lockout or tagout system must be performed only by authorized employees. Affected employees are to be notified by immediate supervisor, or his/her designee, of the application and removal of lockout or tagout devices. Notification must be given before the controls are applied and after they are removed from the machine or equipment. The established procedure for the application of energy control must cover the following elements and actions and done in the following sequence:

8.1 Preparation for shutdown. Before turning off a machine or piece of equipment notify all affected employees that servicing and/or maintenance is required on a
Machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing and/or maintenance.

8.2 **Machine or equipment shutdown.** Utilize an orderly shutdown to avoid any additional or increased hazard(s) to employees as a result of equipment de-energization. The authorized employee must refer to the specific procedure for the machine or equipment being serviced or maintained to identify the type and magnitude of the energy that the machine or equipment utilizes, must understand the hazards of the energy and know the methods to control the energy.

8.3 **Machine or equipment isolation.** All energy-isolating devices needed to control the energy to the machine or equipment must be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s). If the machine or equipment is operating shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.). De-active the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).

8.4 **Lockout or tagout device application.** Only authorized employees can affix the lockout or tagout devices to each energy-isolating device. Lock out the energy isolating device(s) with assigned individual lock(s). When using lockout devices affix the device in such a manner that will hold the energy in a “safe” or “off” position. When using tagout devices affix the device in such a manner that will clearly indicate that the operation or movement of energy-isolating devices from the “safe” or “off” position is prohibited.

8.4.1 Where tagout devices are used with energy-isolating devices designed with the capability of being locked, fasten the tag at the same point at which the lock would have been attached;

8.4.2 Where a tag cannot be affixed directly to the energy-isolating device, locate the tag as close as safely possible to the device and in a position that will be immediately obvious to anyone attempting to operate the device.

8.5 **Stored energy.** Following the application of lockout or tagout devices to energy-isolating devices, the authorized employee must insure that all potentially hazardous stored energy has been rendered safe. Stored or residual energy must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. If there is a possibility of re-accumulation of stored energy to a hazardous level, continue the verification of isolation until the servicing or maintenance is complete or until the possibility of such accumulation no longer exists.

8.6 **Verification of isolation.** Prior to starting work on machines or equipment that has been locked out or tagged out the authorized employee must verify that isolation and deenergization of the machine or equipment have been accomplished.

8.7 **Restoring equipment to service.** When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, follow these steps:

8.7.1 Check the machine or equipment and the immediate area around the machine or equipment to ensure the nonessential items have been removed and that the machine or equipment components are operationally intact;
8.7.2 Check the work area to ensure that all employees have been safely positioned or removed from the area;
8.7.3 Verify that the controls are in neutral;
8.7.4 Remove the lockout devices and reenergize the machine or equipment;
8.7.5 Notify affected employees that the servicing or maintenance is complete and the machine or equipment is ready to use.

8.8 **Release of lockout or tagout.** Before lockout or tagout devices are removed and energy is restored to the machine or equipment the authorized employee should ensure the following:

8.8.1 **The machine or equipment.** Inspect the work area to ensure that nonessential items have been removed and that machine or equipment components are operationally intact;

8.8.2 **Employees.** Check the work area to ensure that all employees have been safely positioned or removed. Notify all affected employees before and after lockout or tagout devices are removed and machines or equipment is re-energized.

8.9 **Lockout or tagout removal.** The employee that applied the lockout or tagout device must be the employee that removes the device. *Exception: when the authorized employee (installer) that applied the lockout or tagout device is not available to remove it, the device may be removed under the direction of the installer’s immediate supervisor.* Specific training and procedures for such removal must be provided by each department involved in lockout or tagout operations. The procedures and training must be documented and demonstrate that the safety equivalent to the original process of having only the installer remove the device is maintained. The specific procedure must include the following elements:

8.9.1 **Verification by the immediate supervisor that the employee who applied the device is unavailable or not at the facility;**
8.9.2 **Make all reasonable efforts to contact the authorized employee to inform them that his/her lockout or tagout device has been removed; and**
8.9.3 **Ensure that the authorized employee has this knowledge before they resume work at the facility.**

9.0 **Testing or positioning of machines, equipment or components.** In situations where lockout or tagout devices must be temporarily removed from the energy-isolating device and the machine or equipment energized to test or position the equipment or component, the following sequence of actions must be followed:

9.1 Clear the machine or equipment of tools and materials;
9.2 Remove employees from the machine or equipment area;
9.3 Remove the lockout or tagout devices;
9.4 Energize and proceed with testing or positioning;
9.5 De-energize all systems and reapply energy control measures to continue the servicing and/or maintenance.

10.0 **Outside personnel (contractors, etc.).** When using outside servicing personnel engaged in activities covered by the scope and application of this Program, the outside employer and the designated OCCC representative must inform each other of their respective lockout or tagout procedures. The designated OCCC representative must ensure that
his/her personnel understand and comply with restrictions and prohibitions of the outside employer’s energy control procedures. If the outside employer has no documented lockout or tagout procedures, they must ensure that their personnel understand and comply with the procedures established by this Program.

11.0 **Group lockout or tagout.** When servicing and/or maintenance are performed by a crew or department, they must utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device. This is accomplished by:

11.1 The application of a multi-lock accepting device by the primary authorized employee to the energy-isolating device;

11.2 The primary authorized employee attaching his/her lock to the multi-accepting device;

11.3 Each authorized employee affix a personal lockout or tagout device to the multi-lock accepting device when they begin work and remove those devices when they stop work on the machine or equipment being serviced or maintained;

11.4 The primary authorized employee removes his/her lock last as well as the multi-lock accepting device when all service or maintenance is complete.

12.0 **Shift or personnel changes.** To insure the orderly transfer of lockout or tagout devices between off-going and on-coming employees and minimize exposure to hazards from unexpected energization, start-up of the machine or equipment, or release of stored energy, follow these procedures:

12.1 The on-coming authorized personnel notify the off-going authorized personnel that they are ready to begin work on the machine or equipment;

12.2 All lockout and/or tagout devices attached to the machine or equipment by the off-going authorized personnel be removed and immediately replaced with like devices by the on-coming authorized personnel;

12.3 The primary authorized employee insures that all pertinent coordination between off-going and on-coming personnel has been completed before the on-coming authorized personnel begin work on the machine or equipment and that all necessary energy has been rendered safe.