CONTROL OF HAZARDOUS ENERGY PROGRAM

MCP Number 00-190

VA Western New York Healthcare System
Buffalo, New York 14215

Rescinded Document:
EM-28, dated Jun 2021

Signatory Authority
Acting Executive Director

Effective Date
10 Sep 2024

Responsible Owner
138-Engineering; 001S-Safety; Bio-Med; Environmental Services

Recertification Date
01 Sep 2029

1. SUMMARY OF CONTENT

a. This policy establishes a Control of Hazardous Energy (Lockout/Tagout) Program consisting of energy control procedures, employee training, and periodic inspections.

2. POLICY

a. This policy establishes a Control of Hazardous Energy (Lockout/Tagout) Program consisting of energy control procedures, employee training, and periodic inspections to ensure that before any employee performs any construction, installation, servicing, or maintenance on a machine, equipment, or building utility system where the unexpected energizing, start up, or release of stored energy could occur and cause injury, the machine, equipment, or building utility system shall be isolated from the energy source, and rendered inoperative.

b. This program is inclusive of ALL hazardous energy types (e.g., electrical, mechanical, pneumatic, hydraulic, chemical, thermal, etc.).

c. This program applies to ALL VAWNYHS personnel, employees, contractors/subcontractors, and vendors who construct, service, or maintain building utility systems; install, service or maintain machines or equipment; operate or use a machine or equipment on which servicing, or maintenance is being performed under lockout tagout; and job requires him/her to work in an area in which servicing or maintenance is being performed.

d. Appropriate lockout devices shall be applied to energy isolating devices, to disable machines or equipment or building utility systems to prevent unexpected energization, start-up or release of stored energy in order to prevent injury to employees. If an energy isolating device is capable of being locked out, it shall utilize a lockout device; substitution with a tagout procedure and device is NOT allowed.

e. Although 29 CFR § 1926 (Safety and Health Regulations for Construction), Section 417 (Lockout and tagging of circuits) does not explicitly require the use of locks, it is the policy of VAWNYHS that the equipment or circuit (and associated controls) shall have locks applied in a manner consistent with 29 CFR § 1910 (Occupational Safety and Health Standards), Section 147 (The control of hazardous energy (lockout/tagout)) [**29 CFR** § 1910.147(c)(2)] and 29 CFR § 1910 (Occupational Safety and Health Standards), Section 333 (Selection and use of work practices) [**29 CFR** § 1910.333(b)(2)].

f. If an Energy Isolation Device cannot be locked and no accessory device exists to enable a lockout device to be applied, the Chief of Engineering shall be notified. Written approval from the Chief of Engineering shall be obtained prior to a tagout procedure being implemented.

3. JUSTIFICATION

a. This policy exists to support the Safety Management System (SMS) and governing safety policy to pursue continual improvement of workplace safety programs mandate in Veterans Health Administration (VHA) Directive 7703, Occupational Safety Management Systems in VHA, dated February 24, 2020.

b. This policy exists to meet the Control of Hazardous Energy Program requirement in 29 CFR § 1910.147 (2023). Occupational Safety and Health Administration (OSHA), Part 1910 (General Industry), Subpart J (General Environmental Controls), Section 147 (Control of Hazardous Energy (lockout/tagout)], Section (c)(1).

c. This policy exists to meet the Electrical Safety Program requirement in National Fire Protection Association (NFPA) 70E (2024), Standard for Electrical Safety in the Workplace, Section 120.2 (Lockout/Tagout Program).

d. This policy complies with:

(1) 29 CFR § 1910.147 (2023). Occupational Safety and Health Administration (OSHA), Part 1910 (General Industry), Subpart J (General Environmental Controls), Section 147 (Control of Hazardous Energy (lockout/tagout)).

(2) 29 CFR §§ 1910.301 through 1910.399 (2023). Occupational Safety and Health Administration (OSHA), Part 1910 (General Industry), Subpart S (Electrical).

(3) 29 CFR §§ 1926.417 (2023). Occupational Safety and Health Administration (OSHA), Part 1926 (Safety and Health Regulations for Construction), Subpart K (Electrical), Safety-Related Work Practices, Lockout and tagging of circuits.

(4) National Fire Protection Association (NFPA) 70E (2024), Standard for Electrical Safety in the Workplace.

4. RESPONSIBILITIES

All employees and contractors must comply with the requirements of the Control of Hazardous Energy Program.

a. **VA Medical Facility Director:** The VA Medical Center Director is responsible for:

(1) Ensuring overall VA medical facility compliance with this policy, and appropriate corrective action is taken if non-compliance is identified.

b. **Chief of Engineering:** The Chief of Engineering (or their designee) is responsible for:

(1) Serve as the overall Control of Hazardous Energy Program Administrator for the Engineering Department.

(2) Ensure all employees within the Engineering Department comply with this policy.

(3) Maintain a list of department Program Administrators, Qualified Employees, and Authorized Employees, based upon department role (Attachment A: List of Control of Hazardous Energy Personnel Template).

(4) Ensure that hazardous energy safety policies and procedures are updated, monitored, and enforced, and are in full compliance with NFPA, OSHA, and VA regulations.

(5) Ensure that all Engineering employees who participate in Control of Hazardous Energy processes and procedures as part of their normal job duties are appropriately trained (Attachment B: Training Requirements).

(6) Authorize tagout procedures if a lockout procedure is not possible.

(7) Authorize all hot tapping operations.

c. **Engineering Shop Supervisors and Biomedical Equipment Support Specialist Supervisors:** Engineering Shop Supervisors and Biomedical Equipment Support Specialist Supervisors are responsible for:

(1) Serve as the Control of Hazardous Energy Program Administrator for their respective shop.

(2) Ensure all employees within their respective shop comply with this policy.

(3) Develop, document, and enforce use of load shed, shutdown, and startup procedures for machines, equipment, and building utility systems under the ownership or control of their respective shop. Review and validate each

procedure annually to ensure the procedures are clearly written, accurate, and precise.

(4) May serve as a Controlling Agent for a Complex Lockout procedure for machines, equipment, or building utility systems under the ownership or control of their respective shop.

(5) Develop, document, and enforce use of Control of Hazardous Energy procedures for machines, equipment, or building utility systems under the ownership or control of their respective shop. Review and validate each procedure annually to ensure the procedures are clearly written, accurate, and precise. Note: In accordance with 29 CFR 1910.147 and NFPA 70E, a documented procedure is NOT required for a particular machine, equipment, or building utility system, when all of the following elements exist [**29 CFR** § 1910.147(c)(4)(i), 2023] [NFPA **70E**:120.5(A)(4), 2024]:

(a) The machine, equipment, or building utility system has no potential for stored or residual energy or reaccumulation of stored energy after shutdown which could endanger employees.

(b) The machine, equipment, or building utility system has a single energy source which can be readily identified and isolated.

(c) The isolation and locking out of that energy source will completely deenergize and deactivate the machine, equipment, or building utility system.

(d) The machine, equipment, or building utility system is isolated from that energy source and locked out during construction, installation, servicing, or maintenance.

(e) A single lockout device will achieve a locked-out condition.

(f) The lockout device is under the exclusive control of the authorized employee performing the construction, installation, servicing, or maintenance.

(g) The construction, installation, servicing, or maintenance does not create hazards for other employees.

(h) There have been no accidents involving the unexpected activation or reenergization of the machine, equipment, or building utility system during construction, installation, servicing, or maintenance.

(6) Procure and provide all PPE, tools, equipment, locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware needed to follow and accomplish lockout procedures by isolating, securing, or blocking machines, equipment, or building utility systems from energy sources [**29 CFR** § 1910.147(c)(5)(i), 2023] [NFPA **70E:**120.2(B)(1), 2024].

(7) Conduct and document periodic inspections of load shed and energy control procedures for their respective shop, at least annually to ensure that the procedures and the requirements of this policy are being followed [**29 CFR** § 1910.147(c)(6)(i), 2023] [NFPA **70E:**120.2(B)(3) through 120.2(B)(4), 2024].

(a) The periodic inspection shall be conducted annually and include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected [**29 CFR** § 1910.147(c)(6)(i)(C), 2023].

(b) A periodic inspection shall also be conducted as needed to correct any deviations or inadequacies identified by the shop supervisor [**29 CFR** § 1910.147(c)(6)(i)(B), 2023].

(8) Maintain, review, update, develop, document, and retrain employees on load shed, shutdown, and startup procedures and energy control procedures whenever new infrastructure, new equipment, major replacement, repair, renovation, or modification of a machine, equipment, or building utility system is performed or installed or constructed.

(9) Provide employees with Control of Hazardous Energy training (and retraining) to ensure that the purpose and function of the energy control 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 in accordance with OSHA [**29 CFR** § 1910.147(c)(7)(i), 2023] and, if applicable, NFPA 70E [**70E:**120.2(B)(2), 2024].

(a) Each Qualified Employee and Authorized Employee shall 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 [**29 CFR** § 1910.147(c)(7)(i)(A), 2023].

(b) Each Affected Employee shall be instructed in the purpose and use of the energy control procedure [**29 CFR** § 1910.147(c)(7)(i)(B), 2023].

(c) All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall 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 [**29 CFR** § 1910.147(c)(7)(i)(C), 2023].

(d) The supervisor shall record and document the name of each employee that was trained, the date of the training, and the content of the training provided. A copy of the training materials shall be made available to employees.

(10) Review and approve all proposed Control of Hazardous Energy procedures, and verify facility impacts that will happen as a result.

(11) Identify and maintain a list of qualified employees and a list authorized employees for machines, equipment, or building utility systems under the ownership or control of their respective shop (Attachment A: List of Control of Hazardous Energy Personnel Template).

d. **Healthcare Engineers, Engineering Acquisition Specialists, and Biomedical Engineers:** Healthcare Engineers, Engineering Acquisition Specialists, and Biomedical Engineers are responsible for:

(1) Serve as the Program Administrator for all contracts that they are assigned Contracting Officer Representative (COR) duties to ensure contractors, subcontractors, and vendors comply with this policy including the VAWNYHS specific elements that are more restrictive than the requirements listed in 29 CFR §§ 1926.417.

(2) Serve as the Supplemental Agent (as required) for any contract that they have been assigned COR duties to maintain administrative and contractual control during the execution of any contract related Control of Hazardous Energy procedures.

(3) Investigate, develop, and document Control of Hazardous Energy procedures for various complex lockouts that are required to enable construction or installation activities. Developed procedures shall be vetted with and approved by all shop Supervisors of affected equipment to ensure accuracy (isolation devices, sequence of work, load shed, etc…) and verify facility impacts.

(4) Develop, and document DRAFT Control of Hazardous Energy procedures for all new equipment installed under any contract where they have been assigned COR duties. DRAFT procedures shall be provided to the appropriate shop Supervisors for review, modification, finalization, and implementation.

e. **Chief of Biomedical Engineering and Chief of Environmental Management Service:** The Chief of Biomedical Engineering and Chief of Environmental Management Service (or their designee) is responsible for:

(1) Serve as the Control of Hazardous Energy Program Administrator for their respective department.

(2) Ensure all employees within their respective department comply with this policy.

(3) Maintain a list of department Program Administrators, Qualified Employees, and Authorized Employees based upon department role (Attachment A: List of Control of Hazardous Energy Personnel Template).

(4) Ensuring that all contractor-installed equipment comply with regulatory codes and contract specifications regarding control of hazardous energy.

(5) Ensure that all department employees who participate in Control of Hazardous Energy processes and procedures as part of their normal job duties are appropriately trained (Attachment B: Training Requirements).

(6) Ensuring that the Chief of Engineering is notified as soon as practicable of any building utility system shutdown required to support maintenance or repair of existing equipment or installation of new equipment.

f. **Supervisors/Managers:** All facility Supervisors and Managers are responsible for

(1) Ensuring their employees are familiar with and adhere to the control of hazardous energy program to include a clear understanding of their responsibilities.

(2) Ensuring that all contractor-installed equipment comply with regulatory codes and contract specifications regarding control of hazardous energy.

(3) Ensuring that the Chief of Engineering is notified as soon as practicable of any building utility system shutdown required to support maintenance or repair of existing equipment or installation of new equipment.

g. Qualified Employee: All Qualified Employees are responsible for

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Serve as a Controlling Agent for a Complex Lockout procedure as assigned by their supervisor.

(3) Working with Authorized Employees and Affected Employees to safely load shed or shutdown the machine, equipment, or building utility system following established standard operating procedures or manufacturer specified procedures. **Do NOT shutdown ANY machine or equipment or building utility system while it is under load.** The ONLY exception to this is when VHA Directive or NFPA Code requires switching under load for compliance (e.g. triennial generator run, Automatic Transfer Switch (ATS) testing, etc…).

(4) Operating Energy Isolation Devices that they are specifically qualified for.

(5) Applying appropriate lockout devices and tags to Energy Isolating Devices to disable machines or equipment or building utility systems to prevent unexpected energization, start-up, or (in some cases) release of stored energy.

(6) Where stored energy must be released or cannot be control through the application of an appropriate lockout device, release stored energy that they are specifically qualified for according to manufacturer's instructions,

supervisor's instructions, and industry best practices in a controlled manner to prevent the rapid release of energy.

(7) Verify lack of energy (supplied and stored) prior to notifying the Authorized Employee that the energy source has been removed.

(8) Recording each lockout action taken.

(9) Comply with all installed locks and tags.

(10) Prior to reconnecting the energy source, verify machine or equipment is in a non-start position for the system they are qualified in.

(11) ONLY remove your own personal locks or tags once all your work has been completed, or you are leaving the site at the end of your work shift.

(12) Questions regarding lockout/tagout procedures should be directed to their supervisors.

h. **Authorized Employees:** All Authorized Employees are responsible for

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Serve as a Controlling Agent for a Complex Lockout procedure as assigned by their supervisor.

(3) Notifying Affected Employees about the application and removal of lockout devices. Notification shall be given before the controls are applied, and after they are removed from the machine or equipment.

(4) Working with Qualified Employees and Affected Employees to safely load shed or shutdown the machine, equipment, or building utility system following established standard operating procedures or manufacturer specified procedures. **Do NOT shutdown ANY machine or equipment or building utility system while it is under load.** The ONLY exception to this is when VHA Directive or NFPA Code requires switching under load for compliance (e.g. triennial generator run, Automatic Transfer Switch (ATS) testing, etc…).

(5) Applying appropriate lockout devices and tags to energy isolating devices to disable machines or equipment or building utility systems to prevent unexpected energization, start-up, or (in some cases) release of stored energy.

(6) Where stored energy must be released or cannot be control through the application of an appropriate lockout/tagout device, release stored energy according to manufacturer's instructions, supervisor's instructions, and industry best practices in a controlled manner to prevent the rapid release of energy.

(7) Verify lack of energy (supplied and stored) prior to performing any construction, installation, service, or maintenance work.

(8) Recording each lockout action taken.

(9) Perform construction, installation, service, or maintenance work on isolated machines, equipment, or building utility systems.

(10) Comply with all installed locks and tags.

(11) ONLY remove your own personal locks or tags once all your work has been completed, or you are leaving the site at the end of your work shift.

(12) Questions regarding lockout/tagout procedures should be directed to their supervisors.

i. **Controlling Agent:** All Controlling Agents are responsible for:

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Applying appropriate lockout devices and tags to energy isolating devices to maintain safety oversight and control of the lockout process.

(3) Recording each lockout action taken.

(4) Comply with all installed locks and tags.

(5) ONLY remove your own personal locks or tags once all work has been completed and safety oversight control is no longer required.

j. **Supplemental Agent:** All Supplemental Agents are responsible for:

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Applying appropriate lockout devices and tags to energy isolating devices to maintain administrative and contractual control.

(3) Recording each lockout action taken.

(4) Comply with all installed locks and tags.

(5) ONLY remove your own personal locks or tags once all work has been completed and administrative or contractual control is no longer required.

k. **Affected Employees:** All Affected Employees are responsible for

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Comply with ALL installed locks and tags.

(3) Do NOT remove any installed locks or tags.

(4) Do NOT attempt to startup, operate, use, or otherwise energize any machine or equipment while it is being serviced or maintained.

(5) Understand that attempting to start, energize, or use a locked-out machine, equipment, or building utility system could cause loss of life or limb to another person.

(6) Shutdown any machine or equipment as requested in conjunction with any shutdown notification.

(7) For any suspected problems with patient care equipment or machines, report the issue to their supervisor and to Biomedical Engineering.

(8) For any suspected problems with building service equipment or utility systems, report the issue to their supervisor and Engineering.

l. **Other Employees:** All Other Employees are responsible for

(1) Adhering to the policy and procedures specified in this Control of Hazardous Energy program.

(2) Comply with all installed locks and tags.

(3) Do NOT remove any installed locks or tags.

m. **Contractors:** All Contractors are responsible for:

(1) Comply with the lockout/tagout procedures as established by this policy while working at the VA Facility including the VAWNYHS specific elements that are more restrictive than the requirements listed in 29 CFR §§ 1926.417.

(2) Adhere to the responsibilities listed for the Authorized Employee, Qualified Employee, Affected Employee, or Other Employee as applicable to the contracted work.

1. PROCEDURE: SIMPLE LOCKOUT

a. Only employees who are both Qualified and Authorized may perform Simple Lockout.

(1) Verify the work to be performed meets the definition of a Simple Lockout:

(a) Single Source.

(b) Single Energy Isolation Device (capable of accepting a Lockout Device with or without an approved lockout accessory device).

(c) NOT greater than 600V.

b. If the work to be performed does NOT meet the definition of Simple Lockout, follow Complex Lockout Procedures.

2. PROCEDURE: COMPLEX LOCKOUT

c. Only Qualified Employees and Authorized Employees may perform Complex Lockout.

d. If no Control of Hazardous Energy Procedure is posted, discuss with Supervisor, and follow the General Lockout Procedure to develop the required written plan.

1. PROCEDURE: SIMPLE LOCKOUT

PREPARATION

(1) Preparation for shutdown

(a) Identify the machine, equipment, or building utility system that must be worked on.

(b) Verify the work to be performed meets the definition of a Simple Lockout:

1. Single Source.

2. Single Energy Isolation Device (capable of accepting a Lockout Device with or without an approved lockout accessory device).

3. NOT greater than 600V.

(c) ● If the planned work does NOT meet the definition of Simple Lockout, follow Complex Lockout Procedures.

(d) If it is unclear if the planned work meets the definition of Simple Lockout, stop work, and discuss with Supervisor.

(e) Identify the downstream impacts to the facility of shutting down the machine, equipment, or building utility system that must be worked on by walking the work envelope. This must include an evaluation of any critical patient care systems, critical facility safety systems, critical security systems, or sensitive equipment that will lose utilities (power, water, steam, air) and any facility operations that must be altered due to the machine, equipment, or building utility system being offline.

(f) Identify the type (e.g., electrical, mechanical, pneumatic, hydraulic, chemical, thermal, etc.), level (e.g. voltage, pressure, temperature, etc.), and source (supplied or stored) of energy for the identified machine, equipment, or building utility system.

⚠ CAUTION

Control Power

- Check machines and equipment for alternate control power sources (batteries or Uninterruptible Power Supplies (UPS)) that remain energized when main power is turned off.

(g) Identify the Energy Isolation Device (e.g. circuit breakers, disconnects, switches, valves, etc.) for the energy source identified.

(h) Identify the types and quantity of lockout devices (including any accessory devices) and tags required to affix a lock to each Energy Isolation Device and ensure effective control of all hazardous energy.

2. PROCEDURE: COMPLEX LOCKOUT

PREPARATION

(1) Preparation for shutdown

(a) Identify the machine, equipment, or building utility system that must be worked on.

(b) Review the Control of Hazardous Energy Procedure posted on the identified machine, equipment, or building utility system that must be worked on.

(c) ● If no Control of Hazardous Energy Procedure is posted, discuss with Supervisor, and follow the General Lockout Procedure.

(d) Review the downstream impacts to the facility of shutting down the machine, equipment, or building utility system that must be worked on as listed on the posted Control of Hazardous Energy Procedure.

(e) Review the types (e.g., electrical, mechanical, pneumatic, hydraulic, chemical, thermal, etc.), levels (e.g. voltage, pressure, temperature, etc.), and sources (supplied or stored) of energy for the identified machine, equipment, or building utility system as listed on the posted Control of Hazardous Energy Procedure.

(f) Locate each Energy Isolation Device (e.g. circuit breakers, disconnects, switches, valves, etc.) for each energy source listed on the posted Control of Hazardous Energy Procedure.

(g) Acquire the types and quantity of lockout devices and tags (including any accessory devices) required to affix a lock to each Energy Isolation Device and ensure effective control of all hazardous energy as listed in the posted Control of Hazardous Energy Procedure.

(h) If there are questions about the posted procedure or energy isolation device locking, stop work, and review procedure and workplan with Supervisor.

NOTICE

- Remember: There are ALWAYS exceptions.
- If You Don't Know, ASK - It's Your Life

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1. PROCEDURE: SIMPLE LOCKOUT	2. PROCEDURE: COMPLEX LOCKOUT

1. PROCEDURE: SIMPLE LOCKOUT

NOTIFICATION

(2) Notification of Affected Employees

(a) Based upon the completed review of impacts, notify the relevant managers and supervisors of the planned machine, equipment, or building utility system shutdown and the discuss the expected impacts to their respective spaces.

(b) If the shutdown isn't urgent, coordinate the best date and time with the impacted staff to minimize disruptions to operations, as required.

2. PROCEDURE: COMPLEX LOCKOUT

NOTIFICATION

(2) Notification of Affected Employees

(a) Based upon the impacts listed on the posted Control of Hazardous Energy Procedure, notify the relevant managers and supervisors of the planned machine, equipment, or building utility system shutdown and the discuss the expected impacts to their respective spaces.

(b) If the shutdown isn't urgent, coordinate the best date and time with the impacted staff to minimize disruptions to operations, as required.

(3) Notification of Qualified Employees

(a) Based upon the energy types, levels, and sources listed on the posted Control of Hazardous Energy Procedure, notify the relevant managers and supervisors of the Qualified Employees necessary to operate the listed Energy Isolation Devices and determine availability to perform the work.

1. PROCEDURE: SIMPLE LOCKOUT

TURNOFF / SHUTDOWN

(3) Machine, equipment, or building utility system shutdown.

⚠ WARNING

PERSONNEL INJURY AND EQUIPMENT DAMAGE

- Do NOT shutdown a building utility system without performing load shed first.

(a) Load shed impacted sensitive/critical equipment and high demand equipment/systems downstream of the planned machine, equipment, or building utility system shutdown by using the Building Management System (BMS), prescribed SOPs, and manufacturer instructions. The ONLY exception where load shed is NOT performed is when VHA Directive or NFPA Code requires switching under load for compliance (e.g. tri-annual generator run, ATS testing, etc…)

(b) Shutdown the machine, equipment, or building utility system being worked on:

1. **Machine or Equipment:** Turnoff and shutdown the machine or equipment to be worked on using prescribed SOPs and manufacturer instructions.

2. **Building Utility System:** Once load shed has occurred, then shutdown the building utility system using prescribed SOPs and/or industry best practices.

   a. For electrical utility systems, ensure maintenance mode is turned on both feeders and wherever the Arc Flash Sticker identifies it is required to ensure safe switching (contact supervisor with any questions).

2. PROCEDURE: COMPLEX LOCKOUT

TURNOFF / SHUTDOWN

(3) Machine, equipment, or building utility system shutdown.

⚠ WARNING

PERSONNEL INJURY AND EQUIPMENT DAMAGE

- Do NOT shutdown a building utility system without performing load shed first.

(a) Load shed impacted sensitive/critical equipment and high demand equipment/systems downstream of the planned machine, equipment, or building utility system shutdown by using the Building Management System (BMS), prescribed SOPs, and manufacturer instructions. The ONLY exception where load shed is NOT performed is when VHA Directive or NFPA Code requires switching under load for compliance (e.g. tri-annual generator run, ATS testing, etc…)

(b) Shutdown the machine, equipment, or building utility system being worked on:

1. **Machine or Equipment:** Turnoff and shutdown the machine or equipment to be worked on using prescribed SOPs and/or manufacturer instructions.

2. **Building Utility System:** Once load shedding has occurred, then shutdown the building utility system using prescribed SOPs and/or industry best practices.

   a. For electrical utility systems, ensure maintenance mode is turned on both feeders and wherever the Arc Flash Sticker identifies it is required to ensure safe switching (contact supervisor with any questions).

1. PROCEDURE: SIMPLE LOCKOUT	2. PROCEDURE: COMPLEX LOCKOUT
ISOLATION	**ISOLATION**
(4) Machine or equipment isolation. (a) Operate the Energy Isolation Device (e.g., circuit breakers, disconnects, switches, valves, etc.) such that it is in the “safe” or “off” position. Note that depending upon the situation and system, the “safe” or “off” condition could be the OPEN position or the CLOSED position.	(4) Machine or equipment isolation. (a) The Qualified Employee for each Energy Isolation Device shall operate their respective device (e.g., circuit breakers, disconnects, switches, valves, etc.) in accordance with the posted Control of Hazardous Energy Procedure such that it is in the “safe” or “off” position. Note that depending upon the situation and system, the “safe” or “off” condition could be the OPEN position or the CLOSED position.

1. PROCEDURE: SIMPLE LOCKOUT

LOCKOUT & TAGOUT

(5) Lockout device and tag application.

(a) At the Energy Isolation Device, affix a **SINGLE** lockout device (including the required tag), such that the Energy Isolating Device is held in a "safe" or "off" position.

1. If the Energy Isolation Device is not capable of accepting a lock directly, use an approved lockout accessory device (e.g., circuit breaker device, electrical panel device, gate valve device, ball valve device, cable lock device, gas cylinder device, regulator device, etc…) to keep the Energy Isolation Device in the "safe" or "off" position and allow a lock to be affixed.

2. One lockout accessory device, one lock, **NO EXCEPTIONS**.

3. Information required to be on the tag is listed in the Definition section of this policy and Attachment A

(b) If an energy isolating device is not capable of accepting a lock directly and no approved lockout accessory device is available and cannot be procured, stop work, and notify Supervisor.

2. PROCEDURE: COMPLEX LOCKOUT

LOCKOUT & TAGOUT

(5) Lockout device and tag application.

(a) In accordance with the posted Control of Hazardous Energy Procedure, at each Energy Isolation Device, affix a **SINGLE** lockout device (including the required tag), such that the Energy Isolating Device is held in a "safe" or "off" position.

1. If the Energy Isolation Device is not capable of accepting a lock directly, use an approved lockout accessory device (e.g., circuit breaker device, electrical panel device, gate valve device, ball valve device, cable lock device, gas cylinder device, regulator device, etc…) to keep the Energy Isolation Device in the "safe" or "off" position and allow a lock to be affixed.

2. One lockout accessory device, one lock, **NO EXCEPTIONS**.

3. Information required to be on the tag is listed in the Definition section of this policy and Attachment A

(b) If an energy isolating device is not capable of accepting a lock directly and no approved lockout accessory device is available and cannot be procured, stop work, and notify Supervisor.

1. PROCEDURE: SIMPLE LOCKOUT

CONTROL ZERO ENERGY STATE

(6) Stored energy.

(a) Following the application of lockout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

(b) Stored energy such as springs, elevated members, rotating flywheels, hydraulic systems, air, gas, steam pressure, electrical capacitance, etc., must be dissipated or restrained by reposition, blocking, bleeding down, etc., as identified in specific procedures.

(c) If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

2. PROCEDURE: COMPLEX LOCKOUT

CONTROL ZERO ENERGY STATE

(6) Stored energy.

(a) Following the application of lockout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe in accordance with the posted Control of Hazardous Energy Procedure.

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1. PROCEDURE: SIMPLE LOCKOUT

TRYOUT / VERIFY ISOLATION

(7) Verification of isolation.

(a) Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.

(b) After ensuring no employees are exposed, operate the push button and or the other normal operating controls to ensure the equipment will not start. This will serve as a test start of the equipment. Return the controls to their off position.

(c) Test for de-energization. Follow Live Dead Live procedures in MCP 138-15 Electrical Safety Program. If it's not tested, it's not de-energized.

(d) Once lack of power is verified by testing de-energized, turn over panel or equipment to vendor or if in-house proceed to work.

PERFORM THE WORK

(8) Perform work.

(a) Employees that are both Qualified and Authorized shall perform the required work on the machine, equipment, or building utility system.

2. PROCEDURE: COMPLEX LOCKOUT

TRYOUT / VERIFY ISOLATION

(7) Verification of isolation.

(a) Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.

(b) After ensuring no employees are exposed, operate the push button and or the other normal operating controls to ensure the equipment will not start. This will serve as a test start of the equipment. Return the controls to their off position.

(c) Test for de-energization. Follow Live Dead Live procedures in MCP 138-15 Electrical Safety Program. If it's not tested, it's not de-energized.

(d) Once lack of power is verified by testing de-energized, turn over panel or equipment to vendor or if in-house proceed to work.

PERFORM THE WORK

(8) Perform work.

(a) Authorized Employees shall perform the required work on the machine, equipment, or building utility system.

1. PROCEDURE: SIMPLE LOCKOUT

INSPECT & RESTORE

(9) Release from lockout or tagout.

(a) Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed, and actions taken by the authorized employee(s) to ensure the following:

(b) The machine or equipment.

⚠ WARNING

PERSONNEL INJURY AND EQUIPMENT DAMAGE

- Clear all tools, equipment, and debris from work area and rotating equipment.
- Loose items can become projectile hazards.
- Unaccounted items can cause damage to the equipment.

1. The work area shall be inspected to:

a. Ensure that nonessential items have been removed (personal tools and equipment)

b. Ensure that machine or equipment components are operationally intact (e.g. guards and safety devices are installed).

(c) Qualified Employees.

1. The work area shall be checked to ensure that all employees have been notified to stand clear and are safely positioned or removed from the immediate work area.

2. After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

(10) Lockout or tagout devices removal.

(a) Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device.

(b) If the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the Forcible Lockout/Tagout Removal Procedure.

(11) Testing

(a) Energize the equipment and perform an operational test.

2. PROCEDURE: COMPLEX LOCKOUT

INSPECT & RESTORE

(9) Release from lockout or tagout.

(a) Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed, and actions taken by the authorized employee(s) to ensure the following:

(b) The machine or equipment.

⚠ WARNING

PERSONNEL INJURY AND EQUIPMENT DAMAGE

- Clear all tools, equipment, and debris from work area and rotating equipment.
- Loose items can become projectile hazards.
- Unaccounted items can cause damage to the equipment.

1. The work area shall be inspected to:

a. Ensure that nonessential items have been removed (personal tools and equipment)

b. Ensure that machine or equipment components are operationally intact (e.g. guards and safety devices are installed).

(c) Qualified Employees.

1. The work area shall be checked to ensure that all employees have been to notified stand clear and are safely positioned or removed from the immediate work area.

2. After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

(10) Lockout or tagout devices removal.

(a) Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device.

(b) If the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the Forcible Lockout/Tagout Removal Procedure.

(11) Testing

(a) Energize the equipment and perform an operational test.

1. PROCEDURE: SIMPLE LOCKOUT	2. PROCEDURE: COMPLEX LOCKOUT
and/or maintenance on the equipment.	and/or maintenance on the equipment.

5. PROCEDURE: SHIFT CHANGE OR PERSONNEL CHANGE

Shift Change

Personnel Change

Critical vs Non-Critical

During any lockout procedure, if the work approaches the end of a workday and will continue into the following workday, personal locks are permitted to remain on Lockout Devices overnight because there is no 24/7 coverage or Shift Change that will occur.

If the lockout must remain due to a lack of parts or the need to order parts and NO work can occur for a minimum of 3 days, then the personal locks shall be removed and a controlling Agent Lock shall be applied.

This decision must be made before end of shift.

6. PROCEDURE: FORCIBLE LOCKOUT/TAGOUT REMOVAL

a. When it becomes necessary to remove an Authorized Employee's Lockout and/or Tagout Device during their absence or to remove a generic lock, the following steps must be followed and documented within the Forcible Lockout/Tagout Worksheet (Attachment E) to ensure employee safety:

(1) Identify the reason the Lockout/Tagout Device must be forcibly removed and notify the Engineering Leadership chain of command.

(a) Is patient, visitor, public, employee, or contractor personal safety at risk?

(b) Is patient care or patient services at risk?

(c) Is property damage to the building, utility infrastructure, Reusable Medical Equipment (RME), stored goods, or perishable goods at risk?

(d) Is the situation urgent?

(2) Identify the isolated machine, equipment, or building utility system that the Lockout/Tagout Device must be removed from. If applicable, identify the work order number or the project number that the original Lockout/Tagout action was associated with.

(3) Identify the Authorized Employee(s) who's Lockout/Tagout Device must be removed. Identification and contact information should be listed on the Lockout/Tagout Device.

(4) Verify the Authorized Employee's location and contact them.

(a) **Government Employees**

1. To verify the Authorized Employee's location, their Supervisor shall use radios, pagers, phone calls, and conduct an active search of the jobsite, the respective shop areas, and the facility at large.

2. If the Authorized Employee is determined to be "off premises," their Supervisor will attempt to reach the employee at home a reasonable amount of times (i.e., 1-3 times) and talk with the employee or other household member.

a. If no answer, and if possible, a message will be left.

b. If the supervisor could not contact the employee or leave a message, the supervisor will call the Safety Officer for authorization to remove the lock.

(b) **Contractors**

1. The COR shall contact the Authorized Employee's Foreman, Site Supervisor, and Project Manager and direct them to contact and identify the location of their employee.

2. If the Authorized Employee is determined to be "off premises," the COR shall notify the VA Contracting Officer of this infraction, the lack of compliance to OSHA and NFPA regulations, and that their Lockout/Tagout Device will be forcibly removed.

(c) All contact attempts made by all individuals, and their results shall be documented on the Forcible Lockout/Tagout Worksheet.

(5) The Engineering manager/supervisor will complete the Forcible Lock/Tag Removal Worksheet for the lock owner and for other affected individuals to assure that they are aware the lockout device has been forcibly removed before the employee resumes work.

(a) The lock owner will sign the Forcible Lock/Tag Removal Form (Appendix A, attached) immediately upon returning to work to acknowledge that his/her lock was removed.

(b) The lock owner will be issued another lock immediately and will sign the Forcible Lock/Tag Removal Worksheet to confirm that another lock has been received.

(c) Other affected employees will sign the Forcible Lock/Tag Removal Worksheet immediately if present or upon returning to work.

(6) Follow the General Lockout/Tagout Procedure, Steps (9) through (11) to restore the machine, equipment, or building utility system to operation.

(7) The Forcible Lock/Tag Removal Worksheet will be sent to the Safety Officer for tracking and filing.

7. PROCEDURE: REPORTING MACHINE, EQUIPMENT, OR BUILDING UTILITY SYSTEM ISSUES

a. Patient Care Machines or Equipment

(1) For any suspected problems with patient care equipment or machines:

(a) Report the issue to their supervisor and to Biomedical Engineering by submitting a work order at: https://yourit.va.gov/htm

(b) If safe to do, shutdown the equipment or machine and take it out of service immediately.

(c) Remove equipment or machine from patient care area and isolate to prevent any other employees from using the equipment or machine. If isolation from other equipment is not possible, post a printout of the work order on machine to inform other employees that it requires service.

b. Building Service Equipment or Utility Systems

(1) For any suspected problems with building service equipment or utility systems:

(a) Report the issue to their supervisor and to Engineering via the workorder system [MCP **138-03**: Request for Engineering Work].

(b) If the issue is an emergency that poses a significant and immediate danger to health, safety, or life of anyone or if it will cause significant damage to the facility, then it shall be reported by calling a Code GREEN.

Location	CODE	Phone Number	Description
Buffalo	**CODE GREEN (Facility)**	x26666	• Flood • Utility Failure (*Type*)
Batavia	**CODE GREEN (Facility)**	x76666	• Flood • Utility Failure (*Type*)

8. EXCLUSIONS

a. Cord and Plug

(1) Lockout devices are not required for work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or startup of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.

(2) This exclusion does NOT preclude the use of cord and plug lockout devices if desired or deemed necessary by the Program Administrator, Qualified Employee, or Authorized Employee.

b. Hot Tap Operations

(1) Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines are not required to follow Control of Hazardous Energy procedures, provided that all of the following requirements are met:

(a) A risk assessment is conducted;

(b) Continuity of service is essential as determined by the Chief of Engineering (or his designee);

(c) Shutdown of the system is impractical as determined by the Chief of Engineering (or his designee); and

(d) Hot Tap Operation Procedures are developed, documented, reviewed and approved, and followed, and special equipment is used which will provide proven effective protection for employees.

(2) Hot Tap Operations are required to be carefully planned by using a process similar to the General Lockout/Tagout Procedure to ensure all potential impacts and risks are understood should the hot tap operation fail to go as planned.

(3) Summary of Hot Tap Operation applicability for VAWNYHS systems when the criteria listed above are met:

System	Pressure	Temperature	Hot Tap Operation
Domestic Cold Water (High Pressure)	100 psi	35°F - 65°F	**Permitted**
Domestic Cold Water (Low Pressure)	80 psi	35°F - 65°F	**Permitted**

System	Pressure	Temperature	Hot Tap Operation
Domestic Hot Water (High Pressure)	100 psi	125°F	**NOT Permitted**
Domestic Hot Water Return (High Pressure)	100 psi	125°F	**NOT Permitted**
Domestic Hot Water (Low Pressure)	80 psi	125°F	**NOT Permitted**
Domestic Hot Water Return (Low Pressure)	80 psi	125°F	**NOT Permitted**
Chilled Water			**Permitted**
Condenser Water			**Permitted**
Steam (Low Pressure) Piping < 2 in diameter	7 psi	232°F	**NOT Permitted**
Steam (Low Pressure) Piping ≥ 2 in diameter	7 psi	232°F	**NOT Permitted**
Steam (Medium Pressure)	30 psi	274°F	**NOT Permitted**
Steam (High Pressure)	90 psi	331°F	**NOT Permitted**
Steam (High Pressure)	120 psi	350°F	**NOT Permitted**
Pumped Condensate		~250°F	**NOT Permitted**
Refrigerant (Supply)			**NOT Permitted**
Refrigerant (Return)			**NOT Permitted**

9. TRAINING

Electrical Safety Training

Qualified Person. A qualified person shall be trained and knowledgeable in the construction and operation of equipment or a specific work method and be trained to identify and avoid the hazards that might be present with respect to that equipment or work method [**70E:**110.4(A)(1), 2024].

(1) All qualified persons will be trained in the requirements of 29 CFR 1910 Subpart S, NFPA 70E, and the safe work practices outlined in this procedure.

(a) Training shall be presented before the employee is assigned duties on or near electrical systems, or whenever supervisors determine that an employee doesn't have the necessary knowledge or skills to work safely near electrical systems. EXCEPTION: For NFPA 70E gaps, a supervisor may simply restrict a new or transferred employee from conducting live electrical work until appropriate training is received. Presenting safe work practice and Subpart S training will allow these employees to perform electrical work in a de-energized state.

(b) Qualified persons shall be familiar with the following:

1. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment,

2. The skills and techniques necessary to determine the nominal voltage of exposed live parts,

3. The clearance distances specified for working on or near exposed energized parts and the corresponding voltages to which the qualified person will be exposed,

4. Training records shall include the date(s) of training, the instructor(s), a copy of the written material presented, and the names of the employee(s) to whom the training was given.

Audit - 70E:110.3(L)(3)

- NFPA 70E (TMS 36559)
- Electrical Lockout/Tagout (TMS VA43357)
- Construction: Electrocution (NFED ehs_hsf_d20_sh_enus)
- Contact Release (TMS VA42987)

10. DEFINITIONS

a. **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 [**29 CFR** § 1910.147(b), 2023].

b. **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 this section [**29 CFR** § 1910.147(b), 2023].

c. **Boundary, Arc Flash:** (Arch Flash Boundary) When an arc flash hazard exists, an approach limit from an arc source at which incident energy equals 1.2 cal/cm^2 (5 J/cm^2) [NFPA **70E:**100, 2024].

d. **Boundary, Limited Approach:** (Limited Approach Boundary) An approach limit at a distance from an exposed energized electrical conductor or circuit part within which an electric shock hazard exists [NFPA **70E:**100, 2024].

e. **Boundary, Restricted Approach:** (Restricted Approach Boundary) An approach limit at a distance from an exposed energized electrical conductor or circuit part within which there is an increased likelihood of electric shock, due to electrical arc-over combined with inadvertent movement [NFPA 70E:100, 2024].

f. **Capable of Being Locked Out:** An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability [**29 CFR** § 1910.147(b), 2023].

   Capable of Being Locked Out means **NO** accessory devices are required to apply a lockout device.

g. **Change, Personnel:** (Personnel Change) The orderly transfer of lockout or tagout device protection between Qualified Employees or Authorized Employees where 24/7 coverage is NOT provided. See Shift Change for 24/7 coverage situations.

h. **Change, Shift:** (Shift Change) The orderly transfer of lockout or tagout device protection between off-going and incoming Authorized Employees where 24/7 coverage is provided by Authorized Employees for Engineering services who will perform maintenance or repair work across all shifts.

For purposes of this policy, this scenario only applies to boiler plant operations. See Personnel Change for other non-24/7 coverage situations.

i. **Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them [**29 CFR** § 1926.32(f), 2023].

An employee who has been selected by the Facility Director / Engineering Manager or Appointed Designee as a "COMPETENT PERSON" by virtue of their experience and training to conduct training and audits as it pertains to the Lockout / Tag-out program (see attachment A).

j. **Complex Lockout/Tagout:** A complex lockout/tagout procedure is required where one or more of the following exists [NFPA **70E:**120.5(A)(5), 2024]:

(1) Multiple energy sources

(2) Multiple crews

(3) Multiple crafts

(4) Multiple locations

(5) Multiple employers

(6) Multiple disconnecting means

(7) Particular sequences

(8) Job or task that continues for more than one work period

k. **Controlling Agent:** A Qualified Employee or an Authorized Employee who has been assigned primary safety responsibility over a group of employees working under the protection of a group lockout or executing a Complex Lockout Procedure.

l. **Double Block and Bleed:** The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves [**29 CFR** § 1910.146(b), 2023].

m. **Energized:** Connected to an energy source or containing residual or stored energy [**29 CFR** § 1910.147(b), 2023].

n. **Energy Isolating Device:** A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

(1) A manually operated electrical circuit breaker;

(2) A disconnect switch;

(3) A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently;

(4) A line valve;

(5) A block; and

(6) Any similar device used to block or isolate energy.

(7) Push buttons, selector switches and other control circuit type devices are NOT energy isolating devices [**29 CFR** § 1910.147(b), 2023].

o. **Energy Source:** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy [**29 CFR** § 1910.147(b), 2023].

p. **Group Lockbox:** A storage device that can be used to capture key(s) for the effective lockout of building utility systems, equipment, or machines when multiple authorized employees will be performing work. Each Energy Isolation Device on the equipment is secured with a single Lockout Device. The key for each Lockout Device is placed within the Group Lockbox. Each authorized employee places their own Lockout Device, Personal on to the Group Lockbox to prevent it from opening. Once the work has been completed, the authorized employees remove their Personal Lockout Device from the Group Lockbox freeing the keys inside and allowing the locks on the isolation devices to be removed. The Group Lockbox ensures that the keys to the Energy Isolation Device lock cannot be accessed until the last authorized employee lock has been removed.

q. **Group Lockout Hasp:** A lockout device that allows multiple locks to be attached to a single lockout point on an Energy Isolation Device that meets the definition of “Capable of Being Locked Out”. Sometimes also called a “Tree”. A Group Lockout Hasp shall NOT be used unless the Energy Isolation Device is “Capable of Being Locked Out”. Do NOT use a Group Lockout Hasp in conjunction with any other facilitating lockout device. In almost all cases, if Group Lockout Hasp use is being considered, then the Lockout/Tagout Procedure meets the requirements of a Complex Lockout/Tagout Procedure and a Group Lockbox should be used instead to minimize the number of personal locks required and allow the group lockout’s primary authorized employee to efficiently ascertain the exposure status of individual group members.

r. **Hazardous Energy:** Any energy (stored or source; including electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other sources) in machines and equipment that can be hazardous to workers.

s. **Hot Tap:** A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks)

under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems [**29 CFR** § 1910.147(b), 2023].

t. **Load Shed:** Process by which a building utility system, machine, or equipment is pre-emptively shut down in a controlled and deliberate manner to reduce energy consumption and demand prior to isolating the energy sources. This lowers energy levels in the building utility system, machine, or equipment and thus reduces the risk of personnel injury and equipment damage while performing the required energy isolation actions.

u. **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 [**29 CFR** § 1910.147(b), 2023].

Lockout is accomplished when Qualified and/or Authorized Employees servicing a machine, piece of equipment or building utility system ensure that all energy sources are identified and isolated, and keyed Lockout Devices and identification tags are applied to all Energy Isolation Devices such as disconnects, breakers, or valves and test starting the equipment before starting work.

v. **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. Included are blank flanges and bolted slip blinds [**29 CFR** § 1910.147(b), 2023].

(1) The most stringent of 29 CFR regulations shall be followed at all times. In accordance with 29 CFR § 1910.333, VAWNYHS policy is that each lock applied shall also have a tag affixed to the hasp [**29 CFR** § 1910.333(b)(2)(iii)(A), 2023].

(2) **Lock, Energy Isolation Device:** A lock that is applied to the Energy Isolating Device to prevent it from being operated during a Lockout. The lock shall only be able to be opened by a single unique key.

When performing a Simple Lockout, the **Lock, Energy Isolation Device** will be the same as the **Lock, Personal**.

(3) **Lock, Personal:** A lock that is applied to 1) the Energy Isolating Device during a Simple Lockout or 2) the Group Lockout Hasp or Group Lock Box during a Complex Lockout. The lock shall only be able to be opened by a single unique key. That key shall be controlled by the Employee who installed the lock. These locks are applied when:

(a) Qualified Employee is:

1. Serving as Controlling Agent or

2. Serving as Authorized Employee.

(b) Authorized Employee is:

1. Serving as the Controlling Agent or

2. Going to work on the isolated equipment. The lock is removed from the Group Lockout Hasp or Group Lock Box when the Authorized Employee's work shift ends and/or the Authorized Employee is no longer working on the machine, equipment, or building utility system.

(c) Healthcare Engineers, Engineering Acquisition Specialists, and Biomedical Engineers are serving as Supplemental Agents.

(4) See Attachment A for application and content requirements.

w. **Normal Production Operations:** The utilization of a machine or equipment to perform its intended production function [**29 CFR** § 1910.147(b), 2023].

x. **Other Employees:** Employees whose work operations are or may be in an area where energy control procedures may be utilized [**29 CFR** § 1910.147(c)(7)(i)(C), 2023].

y. **Program Administrator:** A person who is responsible for the oversight of lockout and tagout procedures and ensures compliance with this policy.

z. **Qualified Employee/Person:** One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project [**29 CFR** § 1926.32(m), 2023].

One who has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations and has received safety training to identify the hazards and reduce the associated risk [NFPA **70E:**100, 2024].

For purposes of this policy, qualified employees are individuals who are allowed to operate Energy Isolation Devices. Employees will be qualified for specific equipment, machines, and building utility systems.

aa. **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 startup of the equipment or release of hazardous energy [**29 CFR** § 1910.147(b), 2023].

bb. **Setting Up:** Any work performed to prepare a machine or equipment to perform its normal production operation [**29 CFR** § 1910.147(b), 2023].

cc. **Simple Lockout/Tagout:**

(1) Any Lockout/tagout procedure that does NOT meet the requirements of Complex Lockout/Tagout.

(2) Only performed by employees that are both qualified and authorized.

(3) Any Lockout/Tagout that meets the requirements listed below and is NOT required to have a documented procedure [**29 CFR** § 1910.147(c)(4)(i)].

(a) The building utility system or machine or equipment has a single energy source which can be readily identified and isolated.

(b) The isolation and locking out of that energy source will completely deenergize and deactivate the building utility system or machine or equipment.

(c) A single lockout device will achieve a locked-out condition.

(d) The lockout device is under the exclusive control of the authorized employee performing the construction, installation, servicing, or maintenance.

(4) All lockout/tagout procedures that involve only a qualified person(s) de-energizing one set of conductors or circuit part source for the sole purpose of safeguarding employees from exposure to electrical hazards shall be considered to be a simple lockout/tagout procedure [NFPA **70E**:120.5(A)(4), 2024].

dd. **Supplemental Agent:** An Affected Employee that has primary responsibility for administrative oversight of the Lockout Procedure. Typically these are Healthcare Engineers and Engineering Acquisition Specialists with COR responsibilities on the contract that requires the Lockout Procedure to be performed.

ee. **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 [**29 CFR** § 1910.147(b), 2023].

Tagout is a comparable procedure to lockout, but not as secure.

Typical use cases include: vent or bleed valves, or other devices that do not incorporate a locking device.

Using a tagout device alone (without a lockout device) shall only be permitted after obtaining written permission from the Chief of Engineering.

Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited, and removal of the tag is prohibited. Tags shall be attached to the isolation device with a durable, one-time use, nylon tie wrap.

ff. **Tagout Device:** A prominent warning device, such as a tag and a means of attachment, which can be securely fastened (using a durable, non-reusable nylon cable tie, 50 lbs break force) 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 [**29 CFR** § 1910.147(b), 2023].

(1) The most stringent of 29 CFR regulations shall be followed at all times. In accordance with 29 CFR § 1910.333, VAWNYHS policy is that each lock applied shall also have a tag affixed to the hasp [**29 CFR** § 1910.333(b)(2)(iii)(A), 2023].

(2) **Tag, Energy Isolation Device:** A tag that is attached to the hasp of 1) the Authorized Employee's lock during a Simple Lockout or 2) the Energy Isolation Device lock during a Complex Lockout.

(a) In accordance with 29 CFR § 1910.147(c)(5)(iii), the Energy Isolation Device Tag shall warn against hazardous conditions if the machine or equipment or building utility system is energized and shall include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate.

(b) To facilitate work execution (and if necessary, the forcible removal of a lockout/tagout device), the following information must be on the tagout device attached to the Energy Isolation Device:

1. Hazardous Condition Warning.

2. Authorized Employee's Name (NOT initials).

3. Department and Shop (or Company if a contractor).

4. Phone number.

5. Date and time of locking/tagging.

6. Reason for the lockout/tagout.

(3) **Tag, Personal ID:** A tag that is attached to the hasp of 1) the Energy Isolation Device lock during a Simple Lockout or 2) the Authorized Employee's personal lock during a Complex Lockout.

(a) To facilitate work execution (and if necessary, the forcible removal of a

lockout/tagout device), the following information must be on the tagout device attached to the Authorized Employee's personal lock:

1. Authorized Employee's Name (NOT initials).
2. Department and Shop (or Company if a contractor).
3. Phone number.
4. Date and time of locking/tagging.

(4) See Attachment A for examples of the lock and tag application.

gg. **Unqualified Person:** A person who is not a qualified person [NFPA **70E:**100, 2024].

11. REFERENCES

a. NFPA 70, National Electric Code (NEC)

b. NFPA 70B, Standard for Electrical Equipment Maintenance

c. NFPA 70E, Standard for Electrical Safety in the Workplace

d. NFPA 99, Health Care Facilities Code

e. OSHA Standard 29 CFR 1910 Subpart

f. VHA Directive 1028, Electrical Power Distribution

g. Engineering Memorandum No. 28 – Maintenance Lockout/Tagout

h. Medical Center Policy 138-4, Personally Owned Electrical Appliances

i. Medical Center Policy 90-19, Personally Owned Property Placed in Official Use

j. CEOSH - Medical Equipment Management Guidebook

k. Medical Center Policy 139-02 Medical Equipment Management Plan

12. RESCISSION

Engineering Memorandum 28, Engineering Lockout/Tagout, dated Jun 2021.

13. REVIEW

Review at minimum recertification including when there are changes to the governing document (for example, national policy or a healthcare accreditation body mandate).

14. RECERTIFICATION

This MCP is scheduled for recertification on or before the last working day of (enter Month and Year). This MCP will continue to serve as local policy until it is recertified or rescinded. In the event of contradiction with national policy, the national policy supersedes and controls.

15. SIGNATORY AUTHORITY

//s//

Shawn J. De Fries

Acting Executive Director

VA Western New York Healthcare System

***NOTE**: The signature remains valid until rescinded by an appropriate administrative action.*

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ATTACHMENT A

List of Control of Hazardous Energy Personnel Template

These are separate living lists for each department to be maintained and updated at least annually by:

- Chief of Engineering
- Chief of Biomedical Engineering
- Chief of Environmental Management Services (EMS)

OCCUPATION LIST

Listing must include every occupation within each respective department and include the following information:

- Occupation/Position Name
- Lockout/Tagout Qualification (one of the following) by machine, equipment, and building utility system.
    - Program Administrator (PA)
    - Qualified Employee (QU)
    - Authorized Employee (AU)
    - Affected Employee (AF)

EMPLOYEE LIST

Listing must include every employee within each respective department and include the following information:

- Employee Name
- Occupation/Position Name
- Date of Initial Training
- Date of Last Annual Training

LIST OF CONTROL OF HAZARDOUS ENERGY PERSONNEL

Department: Engineering

OCCUPATION	Electrical (>600 VAC)	Electrical (< 600 VAC and > 8 cal/cm³)	Electrical (< 600 VAC and < 8 cal/cm³)	Electrical (≥ 50 VDC)	Electrical Control (< 50 VAC and VDC)	Steam (≥15 PSI)	Steam (<15 PSI)	Domestic Water (Hot and Cold)	Radiant Heating Water (With Glycol)	Radiant Heating Water (Without Glycol)	Medical Gas Source Equipment	Medical Gas Supply Piping
CHIEF OF ENGINEERING	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
ASSISTANT CHIEF OF ENGINEERING	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
MAINTENANCE AND OPERATIONS SUPERVISOR	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
AIR CONDITIONING EQUIPMENT MECHANIC SUPERVISOR	NA	NA	NA	NA	QU	NA	AU	NA	QU	QU	NA	NA
AIR CONDITIONING EQUIPMENT MECHANIC	NA	NA	NA	NA	QU	NA	AU	NA	QU	QU	NA	NA
MAINTENANCE MECHANIC -AC	NA	NA	NA	NA	QU	NA	AU	NA	AU	QU	NA	NA
ELECTRICIAN SUPERVISOR	QU	QU	QU	QU	QU	NA	NA	NA	NA	NA	NA	NA
ELECTRICIAN	AU	QU	QU	QU	QU	NA	NA	NA	NA	NA	NA	NA
ELECTRICIAN (HIGH VOLTAGE)	QU	QU	QU	QU	QU	NA	NA	NA	NA	NA	NA	NA
MAINTENANCE MECHANIC SUPERVISOR	NA	NA	NA	NA	NA	QU	QU	QU	NA	QU	QU	QU
MAINTENANCE MECHANIC - PIPEFITTER	NA	NA	NA	NA	NA	QU	QU	QU	NA	QU	QU	NA
PIPEFITTER	NA	NA	NA	NA	NA	QU	QU	QU	QU	QU	QU	QU
BOILER PLANT OPERATOR SUPERVISOR	NA	NA	NA	NA	NA	QU	QU	NA	NA	NA	NA	NA
BOILER PLANT OPERATOR	NA	NA	QU	NA	QU	QU	QU	NA	NA	NA	NA	NA
MAINTENANCE SUPERVISOR - BATAVIA	NA	NA	QU	NA	QU	QU	QU	QU	QU	QU	QU	QU
MAINTENANCE MECHANIC-EQUIPMENT	NA	NA	QU	NA	QU	NA	AU	AU	NA	AU	QU	NA
ENGINEERING PROJECTS SUPERVISOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEALTHCARE ENGINEERS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENGINERING ACQUISITON SPECIALISTS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ATTACHMENT B

Training and Competency Requirements

TRAINING REQUIREMENTS

a. Control of Hazardous Energy Program Training

REQUIREMENT

Regulation: 29 CFR 1910.147(c)(7)(i)

- Ensure that the purpose and function of the energy control 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.
- Each authorized employee shall 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.
- Each affected employee shall be instructed in the purpose and use of the energy control procedure.
- All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall 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.

APPLICABILITY

Employees: All Employees.

Roles:
- ☐ Program Administrator
- ☒ Qualified Employee
- ☒ Authorized Employee
- ☒ Affected Employee
- ☒ Other

FREQUENCY

Initial:
- Completed within 45 days of program establishment.

Retraining:
- Annual (minimum), or
- At the discretion of Supervisor

TRAINING

- Department briefing on the Control of Hazardous Energy Program conducted by the Department Program Administrator or their designee.

DOCUMENTATION

- Briefing materials (dated), and
- Attendance sheet (dated)

b. Electrical Safety Training

REQUIREMENT

Regulation: NFPA **70E**:110.4(A), 2024

- Understand the specific hazards associated with electrical energy.
- Safety-related work practices and procedural requirements, as necessary, to provide protection from the electrical hazards associated with their respective job or task assignments.
- Identify and understand the relationship between electrical hazards and possible injury.

APPLICABILITY

Employees: All Employees who are exposed to an electrical hazard when the risk associated with that hazard is not reduced to a safe level by the applicable electrical installation requirements [NFPA **70E**:110.4(A), 2024].

Roles:
- ☐ Program Administrator
- ☒ Qualified Employee
- ☒ Authorized Employee
- ☐ Affected Employee
- ☐ Other

FREQUENCY

Initial:
- As listed in MCP 138-15 Electrical Safety Program

Retraining:
- As listed in MCP 138-15 Electrical Safety Program

TRAINING

- As listed in MCP 138-15 Electrical Safety Program

DOCUMENTATION

- As listed in MCP 138-15 Electrical Safety Program

c. Electrical Lockout/Tagout Procedure Training

REQUIREMENT

Regulation: NFPA **70E**:110.4(B), 2024

- Lockout/Tagout Procedures.
- Responsibility in the execution of the procedures.

APPLICABILITY

Employees: Employees involved in the lockout/tagout procedures of electrical systems [NFPA **70E**:110.4(B), 2024].

Roles:
- ☐ Program Administrator
- ☒ Qualified Employee
- ☒ Authorized Employee
- ☐ Affected Employee
- ☐ Other

FREQUENCY

Initial:
- Completed within 45 days of work assignment to employee.

Retraining:
- Every 3 years minimum, or
- When procedures are revised, or
- At the discretion of Supervisor

TRAINING

- Procedural review, and
- On-the-job work envelope walk and procedure review prior to execution of work

DOCUMENTATION

- Control of Hazardous Energy Procedure,
- Briefing materials (dated), and
- Attendance sheet (dated)

d. Electrical Emergency Response Training

REQUIREMENT

Regulation: NFPA **70E**:110.4(C), 2024

- Methods of safe contact release.
- First aid, Emergency Response, and Resuscitation.

APPLICABILITY

Employees: Employees exposed to electric shock hazards and those responsible for the safe release of victims from contact with energized electrical conductors or circuit parts and responders to medical emergencies [NFPA **70E**:110.4(C), 2024].

Roles:
☐ Program Administrator
☒ Qualified Employee
☒ Authorized Employee
☐ Affected Employee
☐ Other

FREQUENCY

Initial:
- As listed in MCP 138-15 Electrical Safety Program

Retraining:
- As listed in MCP 138-15 Electrical Safety Program

TRAINING

- As listed in MCP 138-15 Electrical Safety Program

DOCUMENTATION

- As listed in MCP 138-15 Electrical Safety Program

e. Steam Lockout/Tagout

REGULATION

Regulation: VHA DIRECTIVE 1810 Appendix A.3.f., 2023

- Methods of safe contact release.
- First aid, Emergency Response, and Resuscitation.

APPLICABILITY

Employees: All Employees who deal with steam systems or devices serving in the lockout/tagout roles listed below as identified by their respective department.

Roles:
☐ Program Administrator
☒ Qualified Employee
☒ Authorized Employee
☐ Affected Employee
☐ Other

FREQUENCY

Initial:
- Completed within 45 days of work assignment to employee.

Retraining:
- Every 3 years minimum, or
- When procedures are revised, or
- At the discretion of Supervisor

REQUIREMENT

-

f. Hydraulic Lockout/Tagout

REGULATION

Regulation: NFPA **70E**:110.4(C), 2024

- Methods of safe contact release.
- First aid, Emergency Response, and Resuscitation.

APPLICABILITY

Employees: All Employees who deal with steam systems or devices serving in the lockout/tagout roles listed below as identified by their respective department.

Roles:
- ☐ Program Administrator
- ☒ Qualified Employee
- ☒ Authorized Employee
- ☐ Affected Employee
- ☐ Other

FREQUENCY

Initial:
- Completed within 45 days of assignment.

Retraining:
- Every 3 years minimum, or
- When procedures are revised, or
- At the discretion of Supervisor

REQUIREMENT

-

g. Fluid Systems Lockout/Tagout

REGULATION

Regulation: NFPA **70E**:110.4(C), 2024

- Methods of safe contact release.
- First aid, Emergency Response, and Resuscitation.

APPLICABILITY

Employees: All Employees who deal with steam systems or devices serving in the lockout/tagout roles listed below as identified by their respective department.

Roles:
- ☐ Program Administrator
- ☒ Qualified Employee
- ☒ Authorized Employee
- ☐ Affected Employee
- ☐ Other

FREQUENCY

Initial:
- Completed within 45 days of assignment.

Retraining:
- Every 3 years to coincide with issuance of new versions of NFPA 70E, or
- At the discretion of Supervisor

REQUIREMENT

-

ATTACHMENT C

Lockout/Tagout & Shutdown Planning Worksheet

1. Identify the machine, equipment, or building utility system that must be worked on and the estimated duration of the work.

Equipment Type	
Equipment ID	
Make	
Model	
Building	
Room	
Estimated Duration	

2. Identify the downstream impacts to the facility due to shutting down the identified machine, equipment, or building utility system.

			List Impacts
Critical Patient Care Equipment?	☐ No	☐ Yes	
Patient Services Impacts?	☐ No	☐ Yes	
Sensitive Equipment?	☐ No	☐ Yes	
Environmental Impacts?	☐ No	☐ Yes	

3. Identify all:
   - Types (e.g., electrical, mechanical, pneumatic, hydraulic, chemical, thermal, etc.),
   - Levels (e.g. voltage, pressure, temperature, etc.),
   - Sources (supplied or stored), and
   - Isolation locations and devices of energy for the identified machine, equipment, or building utility system.

Energy Type	Level	Energy Source	Isolation Location	Isolation Device ID

NOTICE

Multiple Energy Sources

- If multiple energy sources are identified, Complex Lockout/Tagout procedures shall be followed.

Interior Fold Here → | ← Interior Fold Here

ATTACHMENT D

Common Lockout/Tagout Scenarios and Requirements

Summary table of common Lockout/Tagout Scenarios and the required lock and tag devices.

SCENARIO					REQUIRE	
Energy Isolation Device(s) (quantity)	**Location(s) (quantity)**	**Authorized Employee(s) (quantity)**	**Duration**	**LOTO Type**	**Group Devices**	**Locks (type/function and quantity)**
1	1	1	less than work shift	**Simple**	• N/A	• **Device/Personal:** 1 (affixed to the Energy Isolation Device)
1	1	2+	less than work shift	**Complex**	• Group Lock Box	• **Device/Security:** 1 (affixed to the Energy Isolation Device; lock Lock Box) • **Personal:** 2+ (one per authorized employee affixed to exterior c
					• Group Lockout Hasp	• **Personal:** 2+ (affixed to the Group Lockout Hasp on the Energy per authorized employee)
1	1	2+	greater than work shift	**Complex**	• Group Lock Box	• **Device/Security:** 1 (affixed to the Energy Isolation Device; lock Lock Box) • **Security:** 1 (affixed to exterior of Group Lock Box; remains on all shifts until work is complete) • **Personal:** 2+ (one per authorized employee affixed to exterior c actively working)
					• Group Lockout Hasp	• **Device/Personal:** 2+ (affixed to the Group Lockout Hasp on the Device; one per authorized employee) • **Shop:** 1 (affixed to the Group Lockout Hasp on the Energy Isola Group Lockout Hasp across all shifts until work is complete) •
2+	2+	2+	Any	**Complex**	• Group Lock Box	• **Device:** 2+ (one per Energy Isolation Device; ALL lock keys plac Group Lock Box) • **Shop:** 1 (affixed to exterior of Group Lock Box; remains on Gro shifts until work is complete) • **Personal:** 2+ (one per authorized employee affixed to exterior c
2+	2+	2+ with contractors	Any	**Complex**	• Group Lock Box	• **Device:** 2+ (one per Energy Isolation Device; ALL lock keys plac Group Lock Box) • **Shop:** 1 (affixed to exterior of Group Lock Box; remains on Gro shifts until work is complete) • **COR:** 1 (affixed to exterior of Group Lock Box; remains on Grou shifts until work is complete; optional but potentially useful wher duration outages for construction activities)

CATEGORY	SIMPLE LOCKOUT			
Lock Type	**Personal**	**Energy Isolating Device**	**Security**	**Personal**
Required Lock	**Yes**	**Yes**	**No**	**Yes**
Lock Quantity	1			
Installation Location	Energy Isolation Device			Group Lock Box
Function	• Prevents the Energy Isolation Device from being operated. • **The Energy Isolating Device Lock and the Personal Lock are the SAME lockout device in a simple lockout.**			• Prevents the Group Lock B from being opened.
Key Control	• Maintained by the Authorized Employee who installed the lock.			• Maintained by the Authoriz Employee who installed the lock.
Removal	• Authorized Employee who installed the lock.			• Authorized Employee who installed the lock.

Summary table of various information to be listed on each tag type:

Requirement	Tag (Device)	Tag (Personal ID)	Tag (Shop ID)
Hazardous Condition Warning: DO NOT OPERATE	Required		
Authorized Employee's Name (NOT initials).	Required	Required	
Department and Shop (or Company if a contractor).	Required	Required	Required
Phone number (Authorized Employee or Shop or Company; as applicable)	Required	Required	Required
Date and time of locking/tagging.	Required	Required	Required

ATTACHMENT E

Forcible Lockout/Tagout Removal

LOCK REMOVAL

Date	
Name of Lock Owner	
Location of Lock Being Removed	
Reason for Forcible Removal	

Employee Absence verified? ☐ No ☐ Yes _____

Contact Attempted before Removal? ☐ No ☐ Yes _____

List all contact attempts made:

- Method (e.g., radio, pager, phone, active search, etc.)

Time	Method	Contact Made? (Y/N) Document Name	Message Left? (Y/N)	Content of Discussion or Message

Signatures:

Manager Authorizing Lock Removal	
Person Removing Lock (if different)	

NOTIFICATION TO EMPLOYEE OF LOCK REMOVAL

Notice provided to employee before return to work? ☐ No ☐ Yes Date: _____

Copy Provided to Employee? ☐ No ☐ Yes Date: _____

Signatures:

I verify I received a copy of the emergency lock removal notice for the removal of my lock/tag.

Employee		**Date**	