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ANTELOPE VALLEY STATION SAFETY PROCEDURE

Origination Date:	Procedure No.: 38	Revision No.:
Affected Area(s):	Originator:	
	Final Approval/Date:	
Procedure Description:	Control of Hazardous Energy (LOTO/Clearance) Energy Verification Program	

I. PURPOSE / SCOPE

A. This program establishes the minimum performance requirements for hazardous energy control. The program outlines principles of a uniform operations-controlled Lockout/Tagout protective system that will provide protection for personnel when the unexpected energizing/start-up of machinery or equipment, or the release of stored energy from machinery or equipment, could cause injury to employees or damage to equipment, with minimum interruption of service and minimum delay to necessary work.

B. The program shall consist of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start-up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered in-operative. [29 CFR 1910.147(c)(1)].

C. Additional safeguards necessary to complete the work safely may be added by supervision at any time. The Antelope Valley Station (AVS) Clearance Program uses locks if the device can be locked out and tags to secure each point of protection against accidental operation.

D. This program deals with personnel protection and will be reviewed with all plant personnel at least annually. This program will be reviewed and/or revised annually at a minimum.

E. This program is part of the AVS Life Critical Safety Rule Program.

II. DEFINITIONS OF TERMS

A. Affected Employee: A person whose job requires them to work in proximity to a machine or equipment on which servicing, or maintenance is being performed under lock out or tag out, or whose job requires them to work in an area in which such servicing or maintenance is being performed.

B. Authorized Employee: A person who requests that machines or equipment be locked and/or tagged out to perform servicing or maintenance on that machine or equipment. To become an Authorized Employee, the person must have completed training on the Clearance Procedure and be familiar with the work to be done and the danger involved. An Affected Employee becomes an Authorized Employee when that employee's duties include performing servicing or maintenance covered in this program.

C. Black Lock: A lock used by the Operating Authority for the protection of personnel. It is to be placed on the assigned lock box(s) after equipment or systems have been isolated.

D. Blue Lock: BEPC Authorized Employee lock, issued by Operating Authority and used primarily for the protection of BEPC personnel. The blue lock will be placed on lock boxes associated with the piece of equipment that has been locked and tagged out.

1. A personal blue lock can also be used on equipment as part of a single point isolation.

E. Boundaries: Includes all isolation points within a Clearance.

F. Capable of Being Locked out: An energy isolating device can be locked out if it has a hasp or other means of attachment to which, through which, a lock can be affixed, or a locking mechanism built into it. Other energy isolating devices can be 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.

G. Clearance: The process used to isolate energy sources and a permit for work that involves Lockout/Tagout.

H. Clearance ID Badge: An identification badge with the Authorized Employee’s picture, name, and employee number, or contractor name that is used in conjunction with a lock.

I. Competent Person: A person to be contacted when an employee does not understand any point of the lockout tagout procedure. The Supervisory Authority, Operating Authority, Safety Coordinator and Qualified Operators are competent persons.

J. Contractor: A person or company that undertakes a contract to provide materials or labor to perform a service or do a job. For a contractor to receive a clearance they must be classified as a "Class A" contractor at AVS, and their designated authorized employee must have documented proof of understanding the AVS LOTO program.

K. Contractor Remote Lock Box: lockbox that the contractor foremen or representative places their key into. The contract employees working under his/her protection will place their lock and clearance ID badge on the lockbox before starting the work. The lockbox may be kept at the worksite/break area. All foremen or representatives are responsible for said lockbox/keys while in use.

L. **Danger "Do Not Operate" Clearance Tag**: (tag with a red border): Standard printed tags which are attached to energy sources to denote that the device shall not be operated until the Authorized employee in charge of the work has reported that it is clear and has given specific authorization to operate the device. Refer to appendix.

1. IT MUST BE UNDERSTOOD that the individual who is authorized to approve operation of equipment under the protection of the "RESTRICTED USE" has complete responsibility when doing so and will be held accountable for consequences.

M. Energized: Connected to an energy source device or containing residual or stored energy.

N. Energy-Isolating Device: A device that prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; 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; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

O. Energy Isolation by Tagout Only: A prominent warning, 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 energized or operated until the tagout device is removed.

P. Energy Isolation Verification: Ensuring that the energy control procedure has effectively isolated the machine or equipment. This includes ensuring that the machine or equipment has been shut down properly; required energy isolating devices are identified, located and operated; that the lockout device has been attached to energy isolating devices and that stored energy has been released, discharged, and rendered safe.

Q. Equipment/Area Inspection: Inspection of a work area to ensure that all personnel and nonessential items (e.g., tools, spare parts) are removed to a safe location, and that all the machine or equipment components are operationally intact.

R. Exclusive Control: This applies to Green Restricted Use Clearance being under the exclusive control of the employee performing servicing. (For example, maintenance requesting a special use clearance).

S. Function Test: An energization process performed to determine equipment functionality.

T. Green Restricted Use Clearances: (White tag with a green border.) Standard printed tags, which are attached to energy sources and other operating devices to denote that the device shall not be operated by anyone other than the person given exclusive operating control of that piece of equipment by the Operating Authority.

U. Hazardous Energy: Any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear (radiation), steam/thermal, gravity, or other energy that could cause injury to personnel.

V. Lockout: The placement of a lockout device on an energy-isolating device or removing/disconnecting the power source on equipment, in accordance with this established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

W. 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 the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

X. Lock Box: A box used in the lockout/tagout process. The lock box will contain the key to the lock. Each box will be numbered, and the locks will have the same number as the box.

Y. Locking Center: The Shift Supervisor's office and the Scrubber Control Room where lock boxes are located.

Z. Normal Production Operations: The utilization of a machine or equipment to perform its intended production function.

AA. Operating Authority: Shift Supervisory staff or assigned designee and Scrubber Operator in the operation section is the "Operating Authority" in the power plant and the administrator of this program.

BB. Orange Lock: Contractor's authorized employee lock, issued by Operating Authority, used primarily for the protection of personnel. The orange lock will be placed on lock box associated with the piece of equipment/system that has been locked and tagged out.

CC. Personal grounds: are in addition to grounding devices and are never used as a replacement for a grounding device on the same wire run. Personal grounds are not tagged.

DD. Point of Protection: An energy isolation point, grounding device, block, blank, restraint, blind, or other safeguard designed to withstand, with appropriate safety factor, all forces to which they will be subjected.

EE. Primary Clearance Holder: An authorized employee who signs on the green restricted use clearance and is responsible for the work being performed, and the safety of the employees within their work group who are working under the protection of the Red Tag Clearance. To become a primary clearance holder, one must have completed training on the clearance program, be familiar with the work to be done and the danger involved. The Primary Clearance Holder designation is used only on a Green Restricted Tag Clearance.

1. The Primary Clearance Holder is responsible for following the Clearance Program and Procedures and for representing the work group when signing on to a clearance.

M. Qualified Operator: is an individual that has been trained on the equipment or system(s) needing a clearance and authorized by the Operating Authority to isolate equipment or system(s) by installing and removing locks and tags.

FF. Red Lock: The red lock will be put on energy sources associated with the piece of equipment/systems that has been locked and tagged out for the protection of personnel.

GG. Site Contacts: Basin Electric Power Cooperative (BEPC) on-site employee that directs contractors.

HH. Stored Energy Source: Any device that is capable of holding energy after equipment is shut down. This includes, but is not limited to, capacitors, tanks, pipes, springs, and flywheels.

II. Supervisory Authority: The Plant Manager or designee. This person may delegate this authority if necessary.

JJ. 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 energized or operated until the tagout device is removed. The Do Not Operate tag is symbolic of a lock and must be treated as such.

III. ROLES AND RESPONSIBILITY

A. Applicability

1. This procedure shall apply to all work being completed that requires the control of hazardous energy within AVS. This work may include activities such as, but not limited to erecting, installing, constructing, repairing, adjusting, inspecting, cleaning, testing, operating, or maintaining equipment.
2. Administration of the Lockout/Tagout Clearance Program and Procedures is, in every case, vested in the Operating Authority.

B. Responsibility

1. Safety Coordinator is responsible for:
   a. Developing a safe plan with employees for hard-to-reach valves that are not accessible by ladder, scissor lift, or scaffold.
   b. Ensuring monthly physical inspections of the clearance program are conducted.

c. Annual review of this clearance program.

d. Ensuring initial and annual training is completed.

e. Maintaining training records.

2. Supervisory Authority is responsible for:

a. Overseeing the safe administration of this program.

b. Enforcing the program and disciplinary actions regarding violations of the program and procedures.

c. Authority of operations, maintenance, and proper completion of work tasks.

3. Operating Authority is responsible for:

a. Establishing the boundaries

b. Issuing clearances and ensuring adequate protection throughout the entirety of the process.

c. Designating Qualified Operators.

d. Issuing keys, locks, & red “do not operate” tags to qualified operator.

e. Informing the Authorized Employee requesting a clearance of the protection boundaries and whether or not the equipment is safe to commence work.

f. Answering questions regarding clearance boundaries and assisting personnel in locating “Danger Do Not Operate” tags.

4. Qualified Operators are responsible for:

a. Isolating the equipment and/or system by following the isolation list issued with clearance

b. Placing the tags, locks, and isolation devices on each isolation point.

c. Verify that the equipment has been isolated.

d. Check that all work is completed, guards/breakers are in place, materials and affected employees are removed.

e. Removing tags, locks, and isolation devices when required to do so by the Operating Authority.

f. Signing the Isolation List sheets in the “Placed By” and “Removed By” sections.

g. Returning all tags, keys, locks, and Clearance sheets to the Operating Authority.

5. Authorized Employees are responsible for:

a. Requesting Clearances from the Operating Authority.

b. Verifying that the equipment and/or system has been isolated and initialed.

c. Properly and legibly filling out the Clearance Sheet.

d. Commencing work safely.

e. Placing their assigned ID LOTO Badge with a BEPC blue lock.

f. Ensuring the area is clean and returned to normal working conditions after the job is completed.

6. Affected Employee(s) are responsible for:
   a. Not performing any part of the LOTO procedure. This is a person who works in or round the area where servicing or maintenance is being performed on machines or equipment.
   b. Becoming an authorized employee when that employee's duties include performing servicing or maintenance covered under this procedure.
7. Site Contacts are responsible for:
   a. Coordinating the AVS Clearance procedure to any and all contractors within their control and ensuring they have been properly trained and understand the program requirements.
8. Contractors are responsible for:
   a. Designating and training Authorized Employees.
   b. Accounting for all personnel working under each clearance.
   c. Ensuring the safety of their employees.
   d. Verifying the placement of "Danger Do Not Operate" Tags and Locks and legibly initial tags.
   e. Verifying all work is completed. Example: guards/breakers are in place, materials and affected employees are removed.
   f. Verifying that the equipment has been isolated.
   g. Ensuring the area is clean and returned to normal working conditions after the job is completed.
   h. Placing their assigned ID LOTO Badge with a contractor orange lock.

IV. PROCEDURE

A. Preparation

1. The shutdown of equipment, machinery, and/or systems required for servicing/maintenance will be conducted by operations and/or other departments in accordance with AVS procedures.
2. The Operating Authority will identify, and list on the clearance sheet, all energy sources that must be isolated before that piece of equipment can be serviced.
3. If changing boundaries such as additions, deletions, and changes to clearance isolation points are made, the clearance list must be approved by the Operating Authority or designee. (e.g., locations where tubing, unions, pipes, etc. have been disconnected as a part of the isolation process it must be tagged and included on the clearance sheet).

B. Placement of Locks, Tags, Isolation Devices, & Verification:

1. A request is made for a clearance to perform work to the Operating Authority by an Authorized Employee.
2. A clearance isolation list is developed, including of the assigned lockset:
    a. Boundaries and isolation points are identified by the requestor and Operating authority.
    b. The Operating Authority will initial the "issued-by" section of the clearance. It is up to the Authorized Employee and the Operating Authority to determine the placement of the LOTO devices. The final decision for clearance is the responsibility of the Operating Authority.
3. A Qualified Operator will receive the Isolation List from the Operating authority.
    a. Locks and isolation devices will be determined by a Qualified operator and Operating authority.
    b. Verify with Control Room Operator or Scrubber Operator equipment/system has been shut down
    c. Isolate the equipment and/or system per isolation by following the position section on the Isolation List.
    d. Place the tags, isolation devices, and locks on each component necessary and will initial the "Placed By" section.
    e. If a lock cannot be placed on isolation point, hang tag with cable tie, notify Operating Authority and make note on isolation list and tag.
    f. The Qualified Operator and Operating Authority will ensure that all and/or necessary energy has been released.
4. All sources will be secured/isolated in a manner to prevent the release of energy.
    a. Drains and vents will be tagged in the open position.
5. Each Red "Danger Do Not Operate" Tag will contain the following information:
    a. Date clearance was made.
    b. Position of the equipment isolation or being in a Do Not Operate status.
    c. Location of tag, e.g., equipment or valve number, description of the device.

    Note: Each issued isolation point must be tagged.
6. At this point, equipment is de-energized, isolated and lock(s)/tag(s)/Isolation devices are placed and verified by the Qualified Operator.

    Note: For the DCS/PLC, a tag will be placed at the corresponding unit monitor in the control room and verification of the magenta (indicates it is tagged out) must be displayed.
7. Once the Operating Authority receives the isolation list and it is properly completed

a. The Operating Authority issues the Clearance.

b. The Operating Authority will lock the lockset key in the lock box using a designated black lock.

c. The key to that lock will then be placed in the Operating Authority's lockable cabinet.

8. Prior to starting work, Authorized Employees will:

   a. Be notified by the Operating Authority that a clearance is issued.

   b. Receive a copy of isolation list.

   c. Walk down the isolations with the list, all while:

      i) Checking that personnel are not in or on the machinery equipment, or in the surrounding area in a position to possibly be injured by the activation of the energy source.

      ii) Rechecking all energy sources and lockouts are in place and ensuring equipment cannot be started. Once boundaries have been verified, each authorized employee(s) will initial each red "Do Not Operate" tag. If the Authorized employee(s) cannot locate the red "Do Not Operate" Tag(s), then a Qualified Operator may be requested to show where a tag(s) is (are) at.

      Note: the DCS/PLC will have a tag placed at the corresponding monitor in the control room and verification of the magenta (indicates it is tagged out) must be displayed.

   d. Each authorized employee signing on a clearance shall place a clearance ID badge with a blue lock on a corresponding lock box and will be responsible for said key throughout the duration of the clearance.

   e. Authorized Employee(s) performing work on equipment/system will sign on a clearance.

   f. Authorized Employee(s) will then go perform service on equipment/system(s).

9. Contractors shall follow Section IV in addition to the following

   a. A contractor foremen/representative will verify and legibly initial the "Do Not Operate" tags and position of isolated equipment/system(s). They may be escorted by an AVS employee, if they don't know where the tags are at.

   b. Contractor foremen(s)/representative will attach an orange contractor lock with a red clearance ID badge onto the corresponding lock box.

      Note: If a contractor remote lockbox is used, the contractor foremen/representative will place an orange lock onto the original lock box. They will remove the orange key and place it into the contractor remote lockbox. All contract employees working under the contractor remote lockbox must apply a lock onto it (locks must be provided by each contractor).

c. The contractor foremen(s)/representative will walk down the isolation list, initial each red “Do Not Operate Tag” acknowledging the job has been isolated, it is safe to work and will sign on to the clearance sheet. All other contractor employees have the right to participate in the walkdown verification with operations to identify each type of energy sources being de-energized and to verify that all energy sources have been de-energized.

i. The contractor foremen/representative will verify all employees on the shift are accounted for and then signed off the clearance. Remove their locks and clearance ID badge(s).

a. When the job is complete, the Contractor will notify the Operating Authority.

Note: A signature/initial demonstrates the requester or affected individual(s) have walked down and acknowledges the job has been isolated and is safe to work.

C. Medium Voltage Cabinet Energy Verification:

1. Unit 1 & 2 6.9 KV Switchgear Verification.

a. Verify the isolation boundary on the clearance with the appropriate breaker identification tag.

b. Visually check on the outside of the breaker for the following:

i. The closing fuse breaker switch is in the off position and has been tagged with a red “do not operate” tag and lock.

c. Open the appropriate panel to visually check the hasp and red lock are in the correct position.

i. Verify the “Open” and “Discharge” positions are present.

ii. Visually check the caster wheels are on the ground (Note: Applies only to Unit 1 Switchgear).

d. Once the visual check is complete, close the breaker panel. Hand tighten all fasteners on the door once verified. (Note: Applies only to Unit 2 Switchgear).

e. Once the switchgear has been visually verified, legibly initial and date in the note section of the applicable clearance. This applies to the red “do not operate” tag and red lock placed by the Qualified Operator on the inside of the switchgear.

2. Coal Yard Maintenance Building 6.9 KV Switchgear:

a. Verify the isolation boundary on the clearance with the appropriate breaker identification tag.

b. Visually check on the outside of the breaker panel for the following:

i. The closing fuse breaker switch is in the off position and has been tagged with a red “do not operate” tag and lock.

c. Open the appropriate panel to visually check the hasp and red lock are in the correct position.

i. Verify the “Open” and “Discharge” positions are present.

d. Once the visual check is complete, close the breaker panel.

e. Once the switchgear has been visually verified, legibly initial and date in the note section of the applicable clearance. This applies to the red “do not operate” tag and red lock placed by the Qualified Operator on the inside of the switchgear.

3. Raw Water Pumphouse 4160 Volt Switchgear

a. Verify the isolation boundary on the clearance with the appropriate breaker identification tag.

b. Visually check on the outside of the breaker panel for the following:

I. The closing fuse breaker switch is in the off position and has been tagged with a red “do not operate” tag and lock.

c. Open the appropriate panel to visually check the hasp and red lock are in the correct position.

i. Verify the “Open” and “Discharge” positions are present.

d. Once the visual check is complete, close the breaker panel. Hand tighten all fasteners on door once verified.

e. Once the switchgear has been visually verified, legibly initial and date in the note section of the applicable clearance. This applies to the red “do not operate” tag and red lock placed by the Qualified Operator on the inside of the switchgear.

4. 480 Volt Load Center Verification:

a. Verify the isolation boundary on the clearance with the appropriate breaker identification tag.

b. Verify on the outside of the breaker panel for the following:

i. Verify the “Open” and “Discharge” positions are present.

c. Verify the closed-circuit fuse is removed from the correct fuse holder and the red “do not operate” tag is present (Note: Operator needs to be present during verification. Electricians do not need to have an operator).

D. Releasing Protection:

1. Upon completion of the job, the Authorized Employees will notify the Operating Authority of the status of the equipment and if it is available for service.

2. Prior to the removal of the red “Danger Do Not Operate” tags and locks, the Operating Authority:

a. Will obtain confirmation from all authorized employees that the job has been completed.

b. Will check to verify that all individuals have signed off the clearance form and the equipment/system will be ready for service.

c. All locks with clearance ID badges have been removed from the lock box.

3. After the final inspection has been made available for service:
    a. Operating Authority will retrieve corresponding lockbox key from the controlled cabinet
    b. Operating Authority will designate a Qualified Operator to remove all locks and tags and place all isolation points back in normal operating positions during tag/lock removal.
    c. The Qualified Operator will return the keys, locks, and tags to the Operating Authority and will initial/sign the “Removed By” section on the clearance list.
    d. Once the clearance is done, tags may be reused and will be destroyed when completed by the Operating Authority.

E. Testing of Equipment:

1. Such testing will only be conducted when no other work is being performed by any personnel on the equipment being tested and the equipment and/or system must be clear of tools and materials.
2. When equipment or systems needs to be tested:
    a. All personnel signed on to that clearance will be notified by the Operating Authority.
    b. All personnel shall sign off the clearance.
3. All testing of equipment or systems will be performed only after.
    a. A partial release of the clearance has been approved and conducted by the Operating Authority.
    b. Applicable red “Danger Do Not Operate” tags and locks will be removed.
    c. Only then will the test be performed.
4. Upon completion of the testing
    a. A determination will need to be made by the Authorized Employees and Operating Authority to replace tags and locks.
    b. Or to completely release the clearance.
5. All other authorized employees requesting continued protection must sign back onto the clearance form.
6. Personnel signing back on to the clearance form will verify that all required protections are restored.

F. Green Restricted Use Clearances:

1. Green Restricted Use Clearances shall be identified by the use of a Green Restricted Use tag(s).
2. When equipment such as air heaters, manlifts, overhead doors, cranes, etc. must be energized during maintenance activities.

3. When a Green Restricted Use Clearance is issued by the Operating Authority, operations gives control of that piece of equipment to a Primary Clearance Holder.
4. The following applies for the use of Green Restricted Use Clearances:
    a. Defined work scope and an isolation list must be developed and used for specific pieces of equipment if a Green Restricted Use Clearance is utilized.
    b. If used within a confined space, the confined space must be permit required.
    c. Red and Green clearance tags will NEVER be used on a piece of EQUIPMENT simultaneously.
5. General Procedures for Green Restricted Use Clearances include the following:
    a. Develop work scope.
    b. Request Clearance to perform work.
    c. An isolation list is developed, identifying isolation points.
    d. Create Green Restricted Use clearance.
    e. An authorized employee is given control of that piece of equipment and signs on the clearance.
    f. Only ONE authorized employee can sign on to the clearance signifying control.
    g. Initials “Placed by” on isolation list.
    h. Authorized employee hangs Green Restricted Use Tag at point of operation with an isolation device if applicable.
    i. Once the job is complete, an Equipment/Area Inspection is performed.
    j. The authorized employee removes the green tag(s). and initials “Removed by” on isolation list.
    k. The authorized employee signs off the Clearance.
    l. Operating Authority verifies that tags have been removed, and individual is signed off.
    m. Operating Authority releases the Clearance.

G. Work Continuing Beyond Shift Change:

1. If the equipment being worked on is not ready for operation and will be worked on by signed-on authorized employees the next day,
    a. They will remain signed onto the clearance form.
    b. Their lock will remain on the lockbox assigned to the job.
2. If the equipment being worked on is not ready for operation, and second shift personnel will continue the work.
    a. A crew member from the evening shift will sign onto the clearance form.
    b. Place a blue lock and clearance ID badge onto the corresponding lock box.

3. If new personnel are signing onto the clearance form.
    a. They will legibly initial and verify proper placement of locks with “Danger Do Not Operate” tags.
    b. Then place an additional blue lock and clearance ID badge(s) onto the corresponding lock box.

H. Releasing a Clearance in the Absence of the Authorized Employee:

1. If authorized employees who have signed onto the clearance form are absent.
    a. The Operating Authority must attempt to contact those employees at home.
        i) If unable to contact the employee.
        ii) Then contact must be made with the employee’s supervisor or supervisor designee to release the clearance and remove their tag(s) and lock(s).
        iii) The on-duty Operating Authority and work group supervisor will verify that a tag can be safely lifted/removed or verify that all tasks on the equipment or system have been completed.
        iv) If both supervisors agree that it is safe, the work group supervisor will sign the personnel off the clearance form utilizing the Off-Duty Clearance Release Form (Attachment 2 – BEPC Form # 780). Supervisors releasing the clearance will assume full responsibility for the status and release of the equipment in question.
        (v) If work group supervisor cannot be contacted, superintendent level will need to be contacted. Superintendents releasing the clearance will assume full responsibility for the status and release of the equipment in question.
        (vi) Work group supervisor or designee will notify the authorized employee their lock and clearance ID badge has been removed.
2. Upon release of the clearance:
    a. The work group supervisor will issue an “Off-Duty Clearance Release Form” to authorized employee(s) they signed off.
    b. Follow foot note on form for distribution requirements.
3. The Operating Authority must account for all the keys and locks that were issued on the closed clearance.

I. When a Clearance is Not Required:

1. When changing blades, bits, grinding wheels or other attachments on hand and portable tools:
    a. The power supply cord or battery must be disconnected before change out begins.
2. Cord and plug-connected (i.e., drill presses, saws, etc.) electrical equipment are not required to be tagged if:

a. The equipment is unplugged.

b. The plug is under the single control of the individual performing the servicing and/or maintenance.

3. Minor tool changes, adjustments, hooking up hoses, operating valves and other minor servicing activities that take place during normal operations do not require the equipment to be tagged out:

   a. These activities should be routine in nature, repetitive, and integral to the use of equipment.

   b. These types of activities must be performed without the possibility of injury due to the unexpected energizing, startup, release of stored energy, or movement of equipment parts.

4. Exclusive Control is 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 one employee performing the servicing or maintenance.

V. TRAINING:

A. Training will be provided to all employees whose work may be regulated by this program. Understanding the responsibilities outlined above will be the primary objective of the training.

N. Training may include, but is not limited to, potential hazards, clearance procedures, responsibilities, hands-on testing and inspections.

B. Training will be provided:

1. Before the employee is first assigned duties covered by this program.

2. Anytime there is a change in job assignment.

3. Whenever there is a change in Clearance operations that presents a hazard about which the employee has not previously been trained.

4. Whenever there is a deviation from the work scope or there are inadequacies in the employee's knowledge.

C. The training will establish employee proficiency in the duties required by this program.

D. If it will introduce new or revised procedures as necessary for compliance with this program.

E. Refresher training in this program will be conducted annually.

F. Training documentation will include at a minimum the employee’s name, employee number, and the date of the training.

VI. PERIODIC INSPECTIONS:

A. Review or audits of this program and facility procedures shall be conducted at least annually.

B. Reviews/audits are conducted to correct any deviations or inadequacies identified.

C. Field audits shall be performed by employees from LOTO Advisory Team, Safety Committee or Safety Coordinator.

D. Field audits should include:

   a. Review/discussion between the individual(s) performing the field inspection.

   b. Discussions with Qualified Operator, and the Affected Employee(s).

   c. Audit should include, but not limited to:

      i. The employee's responsibilities under the clearance program or facility procedure.

      ii. Any issues or concerns using the program.

      iii. Suggestions for improvements.

E. Audits shall identify the equipment or systems isolated, the date of the inspection, employees included in the inspection, and the person performing the inspection.

VII. RECORD RETENTION:

A. Clearance Records, Clearance Review/Audit Records, and Training Records will be retained in accordance with the Basin Electric Power Cooperative Retention Schedule.

B. Clearance sheets that resulted in an incident must be retained by the Safety Department per the Records Retention Policy for one year.

C. The Safety Department will maintain Annual Inspection audits for three years (online).

VIII. ATTACHMENTS:

A. ATTACHMENT A – LOCKSETS
B. OFF-DUTY CLEARANCE RELEASE FORM
C. GREEN RESTRICTED USE TAG

IX. REFERENCES:

A. OSHA Regulations 29 CFR 1910.147
B. OSHA Regulations 29 CFR 1910.269

X. REVISION HISTORY

Revision Number	Description of Change	Written by	Approved by	Revision Date	Effective Date
5	Lockbox implementation and update to medium voltage and verification	Travis Watson	Cory Bryngelson	01/20/2025	05/05/2025
4	Added initials for isolation point verification	Travis Watson	Jason Cowan	12/18/2023	12/18/2023

ATTACHMENT A - LOCKSETS

Lockset #	Quantity (per lock set)	Main Plant (Lockset #)	Scrubber (Lockset #)
1 – 150	5	1 – 100	101 – 150
151 – 300	10	151 – 250	251 – 300
301 – 400	20	301 – 370	371 – 400
401 – 450	30	401 – 435	436 – 450
451 – 460	50	451 – 457	458 – 460
461 – 464	80	461 – 463	464

Baghouse Compartment:

Lockset #	Quantity (Per Lock Set)
1A1 – 1A14	7
1B1 – 1B14	7
2A1 – 2B14	7
2B1 – 2B14	7

ATTACHMENT B – OFF DUTY CLEARANCE RELEASE FORM

BASIN ELECTRIC POWER COOPERATIVE

ANTELOPE VALLEY STATION

OFF-DUTY CLEARANCE RELEASE FORM

TO: _____ DATE: _____

FROM: _____

Contact Attempt: (*circle one*) Phone or In Person How Many Attempts: _____

Date Contacted: _____ Time Contacted: _____

Because you could not be contacted in person or by telephone, your LOTO on Clearance Number

_____ was released on the following system equipment under the authorization

of _____. **Personal Lock Number** _____

System/Equipment Description: _____

Description of the reason for the emergency that necessitates the Off-Duty Release:

_____

_____

_____

_____

For the purpose of this document, an event for an Off-Duty Clearance Release is defined as: *an unexplained situation or sudden occurrence of a serious and urgent nature that would place a person or equipment in an unsafe or hazardous condition or demands immediate action to assure continued generation or delivery.*

I am aware that I have been signed off of this LOTO Clearance and that the Clerance is Released:

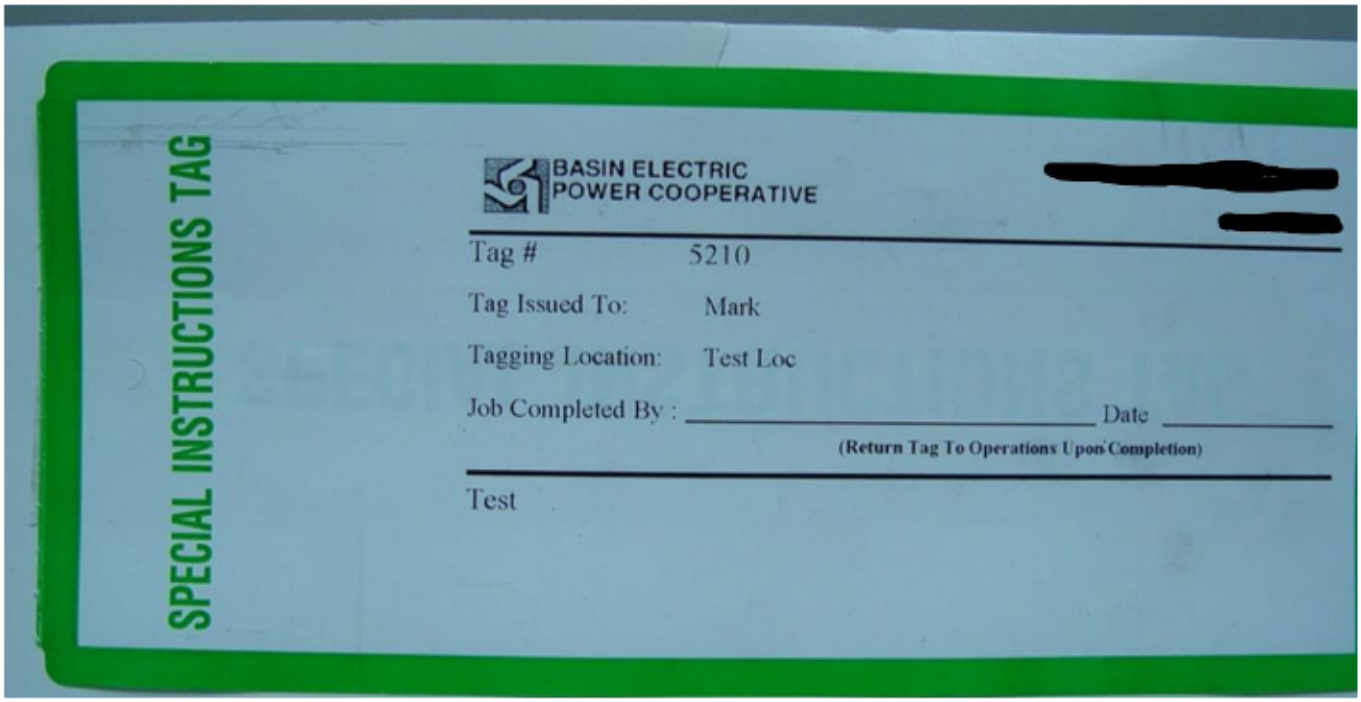
Signed: _____ Date: _____

(Employee Released, Off- duty)

Return Signed Copy to Safety Coordinator

WHITE – Employee **CANARY** - File Copy **PINK** - Supervisor

ATTACHMENT C – GREEN RESTRICTED USE TAG



Procedure No.	Revision No.
Procedure Description: Control Of Hazardous Energy (LOTO/Clearance) Energy Verification Program	

Approved By	Approval Date
Travis Watson Travis Watson (May 6, 2025 14:46 CDT) AVS Safety Coordinator	05/06/2025 Date
Ryan Fisk Ryan Fisk (May 6, 2025 14:29 CDT) Safety Director	05/06/2025 Date
Braden Fagenbush Braden Fagenbush (May 6, 2025 14:10 CDT) AVS Maintenance Superintendent	05/06/2025 Date
David Feil David Feil (May 6, 2025 14:26 CDT) AVS Operations Superintendent	Date
Duane Poitra Duane Poitra (May 6, 2025 09:03 CDT) AVS Plant Superintendent	Date
Cory Bryngelson Cory Bryngelson (May 6, 2025 07:10 CDT) AVS/LOS Plant Manager	Date

Procedure No.	Revision No.
Procedure Description: Control Of Hazardous Energy (LOTO/Clearance) Energy Verification Program	

AVS Control Of Hazardous Energy 2025

Final Audit Report 2025-05-07

Created:	2025-05-06
By:	Angie Wick (awick@bepc.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAiortkyC6jGn0YwNIANrXGjf4AIXY8M13

"AVS Control Of Hazardous Energy 2025" History

Document created by Angie Wick (awick@bepc.com)
2025-05-06 - 7:06:50 PM GMT- IP address: 209.62.238.3

Document emailed to twatson@bepc.com for signature
2025-05-06 - 7:09:15 PM GMT

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Email viewed by twatson@bepc.com
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2025-05-06 - 7:57:12 PM GMT- IP address: 174.210.6.17

Email viewed by dpoitra@bepc.com
2025-05-07 - 11:01:41 AM GMT- IP address: 209.62.238.3

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2025-05-07 - 11:02:09 AM GMT- IP address: 209.62.238.3

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Signature Date: 2025-05-07 - 11:02:11 AM GMT - Time Source: server- IP address: 209.62.238.3

Signer cbryngelson@bepc.com entered name at signing as Cory Bryngelson
2025-05-07 - 12:19:24 PM GMT- IP address: 216.235.161.4

Document e-signed by Cory Bryngelson (cbryngelson@bepc.com)
Signature Date: 2025-05-07 - 12:19:26 PM GMT - Time Source: server- IP address: 216.235.161.4

Agreement completed.
2025-05-07 - 12:19:26 PM GMT