resolute
Forest Products

Calhoun Operations

Control of Hazardous Energy Sources
Lockout Procedure

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I. PURPOSE

The purpose of the lockout policy is to prevent personal injury from unexpected startup, or release of stored energy from mill machinery or equipment during servicing and maintenance work, and to comply with the OSHA standard 29 CFR 1910.147, titled The Control of Hazardous Energy.

It is the policy of the Resolute Forest Products - Calhoun Operations, to establish and enforce safe work procedures that control hazardous energy sources while working on machinery or process equipment. This lockout procedure ensures that the machine or equipment is isolated from all known potentially hazardous energy sources and that energy-isolating devices are used to prevent the unexpected release of stored energy.

II. SCOPE

A. This policy applies to all Resolute Forest Products mill employees, contractors, visitors, and vendors for protection from any potential hazardous energy source while performing work during routine servicing and maintenance, process shutdowns, or during emergency conditions at the Calhoun Operations.

B. Normal production operations are not covered unless servicing and maintenance is performed which requires an employee to remove or by-pass a guard or safety device, or to place any part of his or her body in a danger zone.

C. If the work is routine, repetitive, and integral to the use of the equipment for production, lockout is not required when alternate measures are used that provide effective employee protection.

D. Cord and plug connected equipment is not covered if unplugged and under the exclusive control of the employee performing the servicing of maintenance, and if within arm's reach.

E. Hot Tap operations performed on pressurized equipment are not covered provided documented procedures are followed and special equipment is used which will provide proven effective protection for employees (See Line Breaking Policy on handling "Hot Tap").

III. DEFINITIONS

A. **Operating Employee** – one who operates or uses a machine or equipment on which servicing or maintenance is being performed or works in an area where such work is performed. An Operating Employee becomes an Authorized Employee when that employee's duties include servicing or maintenance work under lockout. This primarily involves the operating department, but can apply to any employee that operates equipment including Maintenance or Lab Technicians.

B. **Authorized Employee** – one who applies their personal lock to equipment or machines in order to perform servicing or maintenance on that machine, equipment, or system. Examples include, but are not limited to, Maintenance Technician servicing machinery or equipment, ~~or~~ an Operator cleaning or inspecting equipment, or a contractor performing service work or inspections.

C. **Automatic Valve** – is an air or motor driven valve. An automatic valve must have a factory supplied mechanical locking method or a department approved written safe procedure for lockout. Air operated valves

that are spring driven can only be used if locked in the spring driven direction. Motor actuated valves must have motor lockout capability. If the motor actuated valve includes a manual override, then the manual override must also be locked out. If process forces can cause the valve to open, then the valve must be locked.

D. **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 a lock can be placed, or it has a built-in locking mechanism.

E. **Contact Person** - The employee responsible for work being performed by a contractor/vendor.

F. **Contractor/Vendor** - Any person who is not an employee and who is performing service or maintenance on equipment on the mill site.

G. **Energized** - Equipment, machinery, or processes are considered to be energized when they are connected to an energy source or contain residual or stored energy.

H. **Departmental Locks** – a group of locks, keyed alike and used by a department as the first lockout device to be applied on a lockbox or a single energy isolating device in that department. All Department Locks are identified by department name and labeled as a Department Lock. These locks are issued through the Safety Department and shall be used for lockout purposes only. All Department Locks should be orange in color.

I. **Energy Isolating Device** – a device that is a positive means to physically prevent the release of energy. Such devices can be electrical circuit breakers, disconnect switches, valves, or blank flanges. (Push buttons, selector switches or other control circuit type devices are NOT energy isolating devices).

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

K. **Group/Gang Lock** - a lock used by a Resolute Forest Products Emergency Response Team member for attaching to a lockbox, or energy-isolating device to isolate a hazardous energy source(s) when multiple individuals are working on equipment or a process system. A tag must be used with a group/gang lock. (Group/Gang locks are approved for Emergency Response Team members only)

L. **Hazardous Energy Source** – any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy that may cause injury or present a hazard to the worker.

M. **Interlock** - Where one or more pieces of equipment, machinery, or a process are connected in such a manner that the action of one part affects the action of the other (i.e., operation, stopping or starting). The interlock can either be mechanical or electrical.

N. **Lockbox** – a specifically designed box used by a department to secure the key(s) of source locks that isolate multiple energy sources within a process system. A lockbox can be permanently installed or it may be portable, but it must be located conveniently to the job site. If more than one lockbox is located at the job site, e.g., portable and permanent lockboxes, then efforts will be made to distinguish the appropriate lockbox for the job at hand. A lockbox must have a Department Lock with hasp and a complete Lockout List attached on the outside of the lockbox prior to the Authorized person applying their lock.

O. **Lockout Device** – a device that utilizes a lock and key to hold an energy isolating device in the safe position for the purpose of protecting individuals.

P. **Local Disconnect** – An electrical energy-isolating device located at or near the particular piece of equipment to be isolated.

Q. **Lockout**: The placement of a lockout device on an energy isolating device, in accordance with the procedures set forth in this procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

R. **Lockout List** - a form used to establish proper identification of each and all energy sources that are to be secured for locking out multiple energy sources. See Appendix D

S. **Long Term Lockout** - Any lockout that extends beyond the shift or includes personnel changes.

T. **Motor Control Center** – An electrical control room (not operating control room) that houses banks of electrical energy sources.

U. **Multiple Locking Device**: A mill approved locking device capable of accepting multiple locks (i.e. hasp).

V. **Normal Production Operations** - The utilization of a machine or equipment to perform its intended production function.

W. **Numbered Seal** - Sturdy seal with consecutive numbering used to lock out a lock box during a lockout to provide an additional measure of security, in addition to the Personal Locks and the Operation Lock.

X. **Other Employee** – one who may, on occasion, be in an area where lockout procedures are used, but is not an authorized or operating person.

Y. **Personal Locks** – a set of two locks, keyed alike and issued to an individual employee for attaching to a lockbox, or an energy-isolating device to isolate the energy source. Personal Locks will be identified by the employee's photo, name, clock number, and department. These locks are issued through the Human Resources Department (HRD) and shall be used for lockout purposes only.

Z. **Process System** – interactive equipment associated with an operational process.

AA. **Process Subsystem** – interactive equipment closely related or designed to perform a common function within an operational process.

BB. **Qualified Mechanical or E/I Technician** – Those Mechanical employees trained in the Resolute Forest Products, Calhoun Operations Basic Electricity Level I.

CC. **Satellite Lockbox** – A portable lockbox utilized by contractors to isolate equipment during routine maintenance or shutdown conditions. The lockbox is to be positioned in the area of the work being performed and must be approved by the department management. Lockout lists for equipment, systems, or subsystems to be locked out will be pre-determined and maintained by the operating department. A copy of the equipment lockout list will be placed in a protective cover to ensure its integrity and attached to the outside of the satellite box for the duration of the work. Once the work is complete and the equipment has been put back in service, the completed lockout list shall be removed from the premises. If more than one lockbox is located at the job site, then efforts must be made to distinguish the appropriate lockbox for the job at hand.

DD. **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 startup of the equipment or release of hazardous energy.

EE. **Single Energy Source** – An energy-isolating device used to isolate energy such as hydraulic, pneumatic, radiation, electrical, etc.

FF. **Source Locks** – a group of locks that are keyed alike and are used to isolate different energy sources within a process system. Locks can be divided into subsets for a process system and must have a different key per set of locks. There will be only one key to a group of Source Locks that are keyed alike. These locks are issued through the Safety Department and must be used for lockout purposes with lockboxes only.

GG. **Tagout Device** – a tag that is used with contractor and group or gang locks and includes places for: 1) Signature; 3) Date; and 4) Department or Company name. (Appendix C)

HH. **Test Equipment** - Equipment used by an Authorized Employee to ensure that electrical circuits are de-energized. This equipment includes but is not limited to volt meters, amp probes, tic tracers, and voltage lights.

II. **Verification of Isolation (Bump Test)** – Involving three (3) qualified, knowledgeable individuals of the departmental equipment to investigate all aspects of energy sources for a lockout sheet to be accurate before a lockout procedure is initiated. This would include a knowledgeable, trained & authorized operator, supervisor (or other qualified individual that is a level up in rank.)

JJ. **VERIFICATION OF ISOLATION PROCEDURE:** Involving three (3) qualified, knowledgeable individuals of departmental equipment to investigate all aspects of energy sources for a lockout sheet to be accurate before a lockout procedure is initiated. This would include a knowledgeable, trained, & authorized operator, supervisor (Or other qualified individual that is a level up in rank)

KK. **Verifier of Isolation** – 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.

LL. **Types of Energy**

A. Fluid/Gaseous (Hydraulic, Pneumatic, Water, Chemical and/or Thermal)

1. The basic principles of the electrical energy lockout procedure apply to fluid and gaseous energy sources as well as hydraulic, pneumatic, water, chemical and/or thermal energy sources. The source of energy must be isolated to prevent the chance of injury.

2. When servicing/maintenance activities might expose personnel to danger from sources of fluid or gaseous energy (hydraulic lines, air lines, stock lines, etc.) or hydraulic, pneumatic, water, chemical and/or thermal energy, these sources must be controlled by closing and locking the appropriate isolation valves.

3. Isolation valves must be locked. When a locking device is not built into the valve, a chain with a padlock or specifically designed valve jackets must be used.

4. Once lines are isolated, any residual pressure will be bled off, and the lines drained. If a drain valve is included in the lockout procedure it must be locked in the open position.

5. In special cases, energy isolation may be achieved by removing electrical or pneumatic energy sources from valve actuators. The Department Superintendent or their designee must specifically approve these special cases, and the Lockout Sheet must reflect the method of isolation and who issued the approval.

B. Mechanical Energy

1. When working on machines or equipment that may have stored mechanical energy, precautions must be taken to prevent the possibility of release of that energy which could endanger personnel.

2. Energy should be released if at all possible. Lifts, rolls, guillotine blades, etc., should be lowered. Spring pressure should be relieved. If full energy release is not possible, the energy must be adequately blocked.

3. Energy may be blocked with pins, blocks, chains, or other devices of substantial strength to prevent any possibility of energy release.

C. Electrical Energy

1. Before maintenance/servicing/cleaning of machines or equipment that requires entrance or close contact with any part of an Affected Employee's body with potential electrical hazards, the main or local power disconnects controlling the primary source of power shall be turned off and locked out. Emergency Stops (E-Stops) and control power sources may not be used as electrical lockout isolation points. The primary, motive source of electrical power must be isolated and locked out.

2. As a final check immediately before work begins, the Primary Authorized Employee locking out the equipment shall verify isolation by attempting to start the equipment from the local jog/start switches, or the local control panel. This process should also be repeated if work and equipment is left unlocked and unmanned for any length of time. Some systems are not equipped with a local jog/start or control panel. In this case, verification must be achieved by two-way communication established between field operator located at the equipment and another qualified employee at the central control system.

3. Anytime that a motor has been disconnected and an employee removes his/her lock, he/she MUST first disconnect the electrical leads in the associated starter. The leads must be taped and secured, and a tag with the proper information must be attached to the starter cabinet. This procedure will eliminate the possibility of live leads at the motor.

   a. Equipment shall be energized and returned to service only after all persons have removed their locks and the area is checked for people who may be exposed to a hazard.

IV. PROCEDURE

A. Sequence of Isolation:

1. Prior to working on equipment, the Authorized Employee will notify the Operating Employee that it will be necessary to isolate the equipment to be worked on.

2. When isolating a *single energy source*, the Authorized Employee will verify that the hazardous energy source is de-energized in accordance with this policy. All Authorized Employees will apply their personal lock to the energy-isolating device.

3. When isolating *multiple energy sources,* the Operating Employee will identify the hazardous energy sources for the equipment and determine the number of lockout device(s) required. Source locks and a Lockbox will be used for locking out multiple energy sources with a common process system or

subsystem. Subsystems within a process system will also be locked out with a lockbox. Lockboxes will be located conveniently to the work area. The operating employee is responsible to verify isolation of the equipment.

4. Electrical Energy Sources:
   a. If the energy source is ***electrical***, and the energy-isolating device is in a MCC, the Operating Employee will contact the appropriate qualified Mechanical or E/I Technician to de-energize the piece of equipment. Name, "E" number, "MCC" number, and Electrical Control Room number will be used to verify the equipment. The qualified E/I Technician will open the circuit breaker door and check the circuit to ensure it has been de-energized by visually checking the stabs. If checking the stabs is not possible or sufficient, the qualified E/I Technician shall verify the circuit has been de-energized by testing the circuit with the appropriate instrumentation and document it on the Lockout List. The operating employee is then responsible to verify and document the isolation of the equipment on the Lockout List. (Appendix D)

   b. After the qualified E/I Technician has de-energized and verified the circuit to be de-energized, a source lock will be applied to the energy-isolating device by Operations.

   c. If a ***local disconnect*** is used to isolate an electrical energy source, the qualified E/I Technician is not required to de-energize and test the circuit as above, as long at the local disconnect has a viewing window so the employee pulling the switch can see the stabs. If there is no window for the employee to see the stabs, then a qualified E/I technician is required. The employee responsible for the isolation, Operating Employee or Authorized Employee, will shut down the equipment or machinery, pull the local switch, and test the circuit by pushing and holding the local start button for a minimum of 10 seconds to allow for timer interface. After testing via the start button, the stop button should be pushed to render the switch in the de-energized state.

5. When utilizing a lockbox lock out the Operating Employee will: a) follow the lockout list (Appendix D) and de-energize and lockout energy sources using source locks; b) verify the equipment is properly isolated, c) place the key(s) to the Source Locks in the lockbox; d) apply a Departmental Lock and a numbered seal to the lockbox, and e) attach the completed lockout list to the outside of the lockbox, indicating what energy source has been locked out.

6. Authorized Employees working on the equipment must first verify that multiple energy sources to be worked on have been documented with a Lockout List, check the seal number and compare it to the lockout list (they should match), check the local start buttons, and then apply their personal lock to the lockbox. A-lockout list is not required for a single source; however, the authorized employee must still apply their personal lock to the single energy source.

7. Contractors working on the equipment will utilize either personal locks or a satellite lockbox for the contractor crew to isolate the energy source(s) via lockbox or single energy isolating device. (See Appendix D) When isolating a single energy source, the contractor becomes an authorized employee(s) and must utilize the appropriate lockout device.

8. When hydraulic equipment is to be isolated, operations will assist the authorized person with the following tasks:

   a. The circuit breaker providing power to the hydraulic pump must be de-energized, locked-out and tested.

   b. If paragraph "a" does not provide proper isolation then hydraulic cylinders, pistons, or levers must be blocked, chocked or pinned with device(s) strong enough to prevent the mechanical equipment from unexpected movement.

c. When conditions exist where movement of hydraulic equipment cannot be chocked, the hydraulic line feeding the movable equipment must be removed and the hydraulic pressure relieved and properly tagged. Note: A line breaking permit is required when removing hydraulic lines.

d. If there is a possibility of re-accumulation of hydraulic pressure to a hazardous level, verification of isolation shall be continued until the work is complete or the possibility no longer exists.

9. When isolating hazardous energy sources controlled by an automatic valve, a double block and bleed arrangement will be used when possible. Automatic control valves as described in the definition section of this policy can be used as an isolation device. If this cannot be accomplished because of process equipment arrangement, then the Mechanical and department supervisors will determine the proper equipment lockout procedure. A qualified Mechanical or E/I technician, in coordination with the Operating Employee, performs the following procedure for automatic valves;

   a. Place valve in the closed position

   b. Close instrument air supply valve

   c. Disconnect instrument air supply line

   d. Tag the air supply fitting on the valve. (Appendix C)

   e. Drain line to automatic valve to bleed-off pressure.

10. To isolate energy sources from pneumatic equipment other than valves (including, but not limited to cylinders, pistons, and diaphragms), the following lockout steps are to be taken:

   a. The air supply to the pneumatic equipment must be isolated (disconnected) and locked-out. If the airline is not capable of being locked, then it must be disconnected and tagged. The air pressure in the airline feeding the movable equipment must be relieved by either removing the line or venting the air pressure.

   b. If paragraph "a" does not provide proper isolation then the cylinders, pistons or levers must be blocked, chocked, or pinned to prevent unexpected movement. Blocks, chocking or pinning devices must be strong enough to prevent the mechanical equipment from unexpected movement.

   c. If there is a possibility of re-accumulation of air pressure to a hazardous level, verification of isolation shall be continued until the work is complete or the possibility no longer exists.

B. Termination of Lockout

1. Authorized Employees servicing or working on the equipment or their supervisors will notify the Process Operator when the equipment is ready to be placed back into service. Before removing lockout devices, loose parts, nonessential items, electrical safety grounds, and tools must be removed and any guards that were removed must be re-installed.

2. Each Authorized Employee who worked on the equipment is responsible for removing their own personal lock when their assigned work is completed, when they are reassigned to a different work area, or they leave the mill site. Employees are forbidden from removing another employee's lock except through the Emergency Removal Process (section D. below).

3. The Operating Employee will make a visual inspection of the work area to ensure that all personnel are in the clear and that the equipment is ready to be placed back into service. The Operating Employee will

remove the department lock and lockout list, obtain the key(s) from the lockbox, remove the Source Locks, and place the equipment back into service.

C. Application of Protective Hardware

1. Lockout Devices

a. Each operating department will maintain Department Locks as a set of keyed alike locks for securing lockboxes within that department. Each department lock will be identified by department name, be orange in color, and keyed differently from other departments or individual's locks. Distribution of keys for the Department Locks is limited to supervisors or designated employees in that respective department. Each department will maintain a list of individuals that have been issued keys to Department Locks.

b. Each lockbox (fixed or portable) will have a specific set of assigned locks (Source Locks) used to secure energy isolating devices within a process system, subsystem or group of equipment for servicing and maintenance. If the quantity of source locks for a process system exceeds what is manageable to implement, then the source locks for that system may be sub-divided into smaller groups. However, each group of locks must be keyed differently. Lockboxes may contain more than one key.

c. Contractors and vendors are responsible for providing their own satellite lockboxes, and are responsible for providing their own personal locks, which must be comparable in quality to locks used by Resolute Forest Products employees.

2. Multi-lock Scissors Hasp - Scissors style hasps will be used when needed to provide space for additional locks. Operations will identify when hasps will be needed and apply them to the energy isolating device or lockbox at the beginning of the lockout procedure. Otherwise, any employee may add additional hasps at any time to provide additional space for more locks.

3. Valve Lockout - Process line valves used to isolate a hazardous energy source will be locked out by a metal chain and lock, a wire rope and lock, or just a lock. The valve handle must be secured to prevent turning.

4. Lockboxes

a. Lockboxes will be used to isolate multiple pieces of equipment during routine maintenance or shutdown conditions.

b. Lockout lists for equipment, systems or subsystems to be locked out and/or tagged will be pre-determined and maintained by the operating department. The list will be placed in a protective cover to ensure its integrity and attached to the outside of the box for the duration of the work. Once the work is complete and the equipment has been put back in service, the completed lockout list shall be removed from the premises. (See Appendix D)

c. A lockbox can be portable or permanently mounted as long as it is positioned in the area of the work being performed and is approved by the Safety Department. If more than one lockbox is located at the job site, e.g. portable and permanent lockboxes, then efforts must be made to distinguish the appropriate lockbox for the job at hand.

D. Emergency Removal of Personal Locks - When an employee fails to remove their personal lock(s) from an energy- isolating device or lockbox after completing the assigned task:

1. The employee, contractor, or vendor will be contacted by their supervisor or contractor coordinator and requested to remove their lock. **If the individual has left the mill site, they will be required to return to the mill and remove their lock without compensation.**

   a. If there is no Supervisor/Team leader available the Area Shift Supervisor may assume those duties.

2. If the employee, contractor supervisor or vendor cannot be contacted, a member of management from operations and Mechanical, along with an EMS/Security Technician will:

   a. Verify that the employee, contractor, or vendor has left the mill site and cannot be contacted.

   b. Notify the mill manager, department manager, or designee that a lock is being removed.

   c. Verify that the equipment locked out is ready to be placed back into service.

   d. Complete the Lockout Removal Form. (See Appendix B)

   e. Remove the lock. The supervisor of the employee or the Area Shift Supervisor is responsible for removing the employee's personal lock(s).

   f. When a personal safety lock is removed as outlined in this section, the individual will be required to sign the Lockout Removal Form (Appendix B) at security located at the main gate upon returning to the mill. The manager or their designee will review the appropriate section of the lockout policy with the individual and take the necessary corrective action to prevent a reoccurrence.

E. Special Consideration

1. Shift Change

   a. The Operating Employee going off duty must review the status of lockout potential hazards with their relief.

   b. The operations supervisor going off shift will inform the on-coming supervisor of the operating areas locked out and the potential hazards and job status.

   c. Before Authorized or Operating individuals leave the mill, they must remove their personal lock(s) from the lockbox(s) or energy-isolating device. The on-coming work shift must apply their personal lock to the energy-isolating device or lockbox and visually verify that proper lockout has been accomplished before beginning work on the equipment

   d. When an Authorized Employee completes work on equipment that others are still working on, the individual must remove their personal lock.

2. Working on Energized Equipment

   When procedures require Operating Employees or Authorized Employees to work in potentially hazardous positions due to the need for equipment to be energized, control of the start or JOG function must be under the exclusive control of a designated individual involved in the activity and direct communication to the employees working in the system. This procedure is not limited to electrically

energized equipment. This procedure also includes equipment energized by pneumatics, hydraulics, etc. Whenever this exception to full lockout is used, a detailed written Operating Procedure must be developed for the special task. These procedures must detail the safety methods for accomplishing the task. All employees expected to use the procedure must receive training on the energized system procedure to be followed.

3. Handwritten Lockouts or Modifications to Existing Lockout Procedures

Any time that an approved existing lockout sheet is not available for a group lockout or a modification to an existing group lockout is needed, a Temporary Modified Lockout Sheet Form must be completed. This form is to provide a system of checks and balances ensuring that all potential energy sources have been identified prior to beginning the lockout procedures. This procedure will involve three (3) qualified, knowledgeable individuals of departmental equipment to investigate all aspects of energy sources for a lockout sheet to be accurate before a lockout procedure is initiated. This would include two (2) knowledgeable, trained & authorized operators, and a supervisor (Or other qualified individual that is a level up in rank).

F. Electrical Hazards

All electrical work must comply with the corporate and mill Electrical Safety Policy

1. General

a. Appropriate diagrammatic drawings, labels, signs, etc., shall be reviewed by persons involved in the lockout to identify all disconnecting devices.

b. Locks/tags shall be installed only on circuit disconnecting devices. Control devices, such as push buttons or selector switches, shall not be used as the primary isolating device.

c. other work activity shall be reviewed to identify where and how other persons may be exposed to electrical hazards.

d. An adequately rated voltage detector shall be used by a Qualified person to test the circuit to verify de-energized. Test equipment shall be verified operational prior to and immediately following the test. Qualified personnel using such test equipment shall be trained on its proper selection and use.

e. When required, proper grounding conductors and/or devices shall be installed on phase conductors and/or circuit parts and shall be applied such that those involved are working between grounds where applicable. All grounding devices shall be rated for the available fault duty.

f. Locks and tags used for electrical lockout must be unique, readily identifiable, and used for lockout purposes only.

g. All devices in the circuit that are used to de-energize and permit lockout of circuit parts shall have appropriate marking and /or labeling to identify its function in the circuit.

h. Single line drawings and schematic diagrams shall be maintained current to accurately represent field conditions.

i. Circuits operating at 50 volts AC and below need not be de-energized provided there is no increased exposure to electrical burns or to explosion due to electric arcs.

j. The circuit shall be considered energized until the device energizing the components is turned off, locked out, and the circuit verified as de-energized with the use of a suitable test instrument and an electrically safe working condition is established.

2. Simple Lockout

a. A lockout/tag-out procedure shall be considered a "Simple Lockout" where it involves Qualified persons only and is de-energizing one circuit or set of circuit parts for the purpose of performing work on or near electrical equipment. The disconnecting device shall remain under exclusive control of the Qualified persons for the duration of the work.

b. The Qualified employee(s) implementing the simple lockout shall be familiar with the hazards associated with electrical energy, the disconnecting means location(s) and operation, and all sources of stored energy involved.

c. The disconnecting means shall then be locked out. For equipment without provisions for a lock, a tag shall be permitted without a lock as long as it is supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained through the use of the normal "lock and tag" method. Examples of additional safety measures include the removal of an isolating circuit element, removing the conductors from the disconnecting device, etc.

3. Complex Lockout

a. The lockout procedure for electrical work shall be considered "Complex" when one or more of the following conditions exist:

- Multiple Energy Sources
- Multiple Crews
- Multiple Crafts
- Multiple Locations
- Multiple Employers
- Unique Disconnecting Means
- Complex or Particular Switching Sequences
- The Job Continues for more than one shift
- The Job involves new workers

b. A "Person-in-Charge" shall be designated for the complex lockout procedure. This person shall:

- Develop a written plan of execution which shall include identification of electrical energy sources and disconnecting devices, single line drawings, schematic's switching plans or other information to help create a safe working condition.
- Communicate the plan to all involved such they understand the hazards and the safety related work practices to be used.
- Be responsible for the safe execution of the complex lockout procedure.

c. All complex lockout plans shall identify the method to account for all persons who may be exposed to electrical hazards during the course of the job.

d. The Person-in-Charge may instruct others on which devices to install locks. The Person-in-Charge is permitted to place locks on the disconnecting devices on behalf of others.

e. If the complex lockout is continued through successive shifts, the Person-in-Charge shall identify the method for lockout transfer and shall communicate with all affected employees.

4. Lockout Equipment

a. Locks and tags used for control of electrical energy shall be unique, readily identifiable as lockout devices and shall be used for no other purpose.

b. When used with complex lockouts, information will be provided that shall reference the associated complex lockout plan, which will be located at the lockbox.

G. Employee Training

1. All employees will be trained annually on this policy, or if there are policy changes. Other individuals will also be trained annually on the purpose and use of this lockout procedure.

2. Retraining will be done when there is a change in job assignment, machines, equipment, or process that present new hazards, a change in this procedure, supervision determines there is a need, or whenever inadequacies in procedures are revealed by periodic inspections, audits, incidents or other events.

3. New employees will be trained to the appropriate Authorized, Operating or Other Employee lockout training level during their safety orientation.

4. Records will be kept with employee's name and date of training.

V. RESPONSIBILITIES

A. General

1. It is the responsibility of management, supervision, and all hourly and salaried employees to enforce this policy.

2. It is the responsibility of each employee to comply with this policy.

B. Employees, Contractors, Vendors, & Visitors

1. Authorized Employees shall notify Operating Employees before and after lockout.

2. Secure equipment by locking out hazardous energy sources at the energy isolating device(s) or lockbox.

3. Employees are responsible for maintaining their personal locks and having them available when needed. Lost, misplaced, damaged, or unidentifiable locks/keys should be reported to the employee's supervisor who will arrange for replacement locks through the Human Resources Department.

4. Clean-up area after work to remove all tools and other equipment.

5. Employees are responsible for removing their own personal lock when their assigned work is complete, or when they are reassigned to a different work area, or they leave the mill site.

6. Responsible for enforcing and complying with all provisions or the Lockout Policy.

C. Department Management/Supervision

1. Ensure that Authorized & Operating employees have been trained in proper procedures for locking hazardous energy sources before working on equipment and that re-training is done annually, or when there are policy changes.

2. Maintain a current list of equipment and processes that require locking for isolating energy sources.

3. Develop, maintain, and provide a "specific" lockout procedure for equipment or process systems that have more than one energy source. Each department is responsible for establishing and maintaining a lockbox system for isolating multiple energy sources.

4. Maintain and ensure the availability of department locks, source locks, hasps, metal chains, lockbox numbered seals, and department lock boxes. Ensure all locks, source locks and lockboxes are properly labeled and identified.

5. Ensure that Operating Employees alert Authorized Employees (workers) of any known or potentially hazardous conditions associated with process equipment lockout.

6. Enforce compliance of the lockout procedure.

7. Ensure all new machinery or equipment installed is designed to accept a lockout device.

8. Annually review, revise, and maintain all department lockout sheets.

D. Safety Department

1. All lock orders originate from, and deliver to the Safety Department. Operating departments will contact the Safety Department when additional locks are needed.

2. Ensure that the locks and other devices used comply with the requirements of the OSHA standard.

3. Coordinate training on safe procedures for lockout.

4. Maintain documentation on employee training with help from the Training Department.

5. Update and review the policy as needed to ensure the safety of all individuals.

6. See that periodic inspections and annual audits are conducted to ensure lockout procedures are being followed, and document these inspections, which will:

   a. Involve a team comprised of representatives from various mill departments to perform lockout inspections. The representatives shall be primary authorized employees other than the one utilizing the lockout procedure being inspected.
   b. Audit at least one application of the procedure for each basic type of energy isolating device (electrical disconnect, valve, blind/blank, blocking pin, etc.) and each basic type of locking device (lock, cable/chain, locking overcap for a valve, etc.) will be observed annually.
   c. Have an inspection team that must observe application of the lockout procedures and talk to employees involved to determine whether:
      - All steps of the procedure are being followed
      - The employees involved know their responsibilities
      - The procedures they follow are adequate

- Any changes should be made

d. Document the inspections and include the name of the inspectors, names of the authorized employees, the date, department and job being observed, the machine or equipment on which the lockout procedure was being used, observations made, and deficiencies noted. The Inspection Form will be completed by the authorized employees conducting the inspection.

e. Generate a completed copy of the Inspection Form that the inspector will submit to the Safety Department.

f. Require that the department being audited review the Inspection Form. Where inadequacies or deviations are noted, corrective action will be taken and authorized employees will be retrained.

g. Require retraining be documented and a copy of the review form, revised procedure, and attendance sheets be submitted to the Safety Department.

E. EMS/Security

1. Assist with removing a lock under Section IV D.

2. Maintain documentation of Appendix B and take control of removed locks.

3. Notify the appropriate supervisor and manager of an individual who had a lock removed under the "Emergency removal of personal locks" section of this policy.

VI. ACCOUNTABILITY

A. Any violations of our lockout procedure will have serious consequences. We are a large company and a "one size fits all" prescription for discipline is not practical. We respect the autonomy of our locations to investigate and apply discipline on the facts of each individual situation and in accordance with their own established guidelines. However, we believe that if employees are given the opportunity to correct behavior and cannot make the behavior correction using the progressive process, permanent separation may be the only alternative.

There are some safety violations that are so serious in nature that immediate and permanent separation of the employee from the workforce is the only alternative. We cannot accept the safety, environmental, or public risks of retaining the employee in some instances, and major safety violations will be reviewed with this in mind.

B. Resolute Forest Products is striving toward the point where all equipment can be locked out and not require that any tagout to be used prior to servicing or maintenance of equipment or machines. Lockout should be used whenever possible.

Approval Signatures:

Derrick Lindgren
General Manager

Joel Finnell
Environmental, Health & Safety Manager

Revised: November 8, 2023
Reviewed: November 8, 2023

APPENDIX A

A. Summary of Locks Used in Lockout Procedures by Resolute Forest Products Employees - All locks used by employees and departments for the purpose of lockout are to be issued by the Human Resource Department and are to be American Lock series 1105 type locks with a controlled key number system.

1. **Personal Locks** - a set of locks, keyed alike and issued to an individual employee for attaching to a lockbox, or an energy-isolating device to isolate the energy source(s). Personal Locks will be identified by: the employee's photo, name, and clock number. These locks are issued through the Human Resources Department (HRD) and **shall be used for lockout purposes only**. Authorized Employees that maintain and service equipment will be issued two keyed alike locks with two keys. All other employees who are required to follow this policy will also be issued two keyed alike locks and two keys. Employees will have their own uniquely keyed set of locks.

    a. Employees are responsible for maintaining their personal locks and having them available when needed. Lost, misplaced, damaged, or unidentifiable locks/keys should be reported to the employee's supervisor who will arrange for replacement locks through the Human Resources Department.

2. **Source Locks** – a group of locks that are keyed alike and are used to isolate different energy sources within a lockbox. Locks can be divided into subsets for a process system and must have a different key per set of locks. All Source locks for a process system should be labeled for a specific lockbox and the type of energy isolating device noted on the appropriate lockout list. There will be only one key to a group of Source Locks that are keyed alike. These locks are issued through the Human Resources Department (HRD) and **shall be used for lockout purposes with lockboxes only.**

    a. Departments are responsible for maintaining their Source Locks and having them available when needed. Lost, misplaced, damaged, or unidentifiable locks/keys should be replaced through the Human Resources Department

3. **Departmental Locks** – a group of locks, keyed alike and used by a Operating Employee's department as the first-on and last-off lockout device to be applied on lockboxes in that department. The purpose of the Departmental Lock is to ensure isolation of the lockbox from the start to finish of a job.

    a. All Department Locks are identified by department name, are orange in color, and labeled as a Department Lock. These locks are issued through the Human Resources Department (HRD) and shall **be used for lockout purposes only**. Distribution of keys for the department locks is limited to supervisors and designated employees in the respective department. Each department will maintain a list of individuals that have been issued keys to Department Locks.

    b. Departments are responsible for maintaining their department locks and having them available when needed. Lost, misplaced, damaged, or unidentifiable locks/keys should be replaced through the Human Resources Department.

Appendix B

Resolute Forest Products – Calhoun Operations
(Reviewed 11/08/23)

Emergency Lockout Removal Form

Date:_____

LOCK TO BE REMOVED

Employee's Name:_____

Employee's Clock Number:_____

(THE EMPLOYEE'S SUPERVISOR MUST VERIFY THE EMPLOYEE'S CLOCK NUMBER AGAINST THE NAME ON THE LOCK)

Reason for Removal:_____

_____

Was the lock required to be cut off? Yes No

Initial

_____Employee called at Home and could not be contacted (MANDATORY)

_____Check with Fellow Workers and could not be located on mill site (MANDATORY)

_____Notified Management that a lock removal is underway (MANDATORY)

_____Verified that the equipment locked out is clear of all personnel (MANDATORY)

Operating Department Supervision/Team Leader Signature:_____

Maintenance Department Supervision/Team Leader Signature:_____

EMS/Security Officer's Signature:_____

(Security must verbally ensure that the employee's department supervisor has contacted/tried to contact the employee and completed all the above information before removing the lock)

Employee's Signature, upon returning to work:_____
(For verification that the employee has been notified of the removal of their personal lock. Security will maintain the original copy of this form and notify the individual's supervisor and department manager that a safety lock has been removed.)

Appendix C

Tagout Device

Resolute Forest Products - Calhoun Operations
Lockout / Tagout Equipment List

Department: Chip Prep

Equipment/Process Locked Out: **Bark to Pile Conveyor, Associated Conveyors, and Plow**

Form Reviewed: 11/2/2016
Form Revised: 11/3/2015
Lock Box # _____
Lock Set # 4
Seal # _____

Date: _____ Purpose: _____

Date Locked	Date Unlocked	Item #	Equipment Identification	Equipment #	Valve Position As Found	Locked Out Position	MCC #	C/R #	Voltage	Locked Out By	Verified By	Unlocked By
		1	Bark to Pile Conveyor	E13-6078		Open	1337 4D	13-12	480V			
		2	Bark & Fines Kraft Scr Conveyor #4	E13-8093		Open	1337-6D	13-12	480V			
		3	SLL BARK CONVEYOR #2	E13-7075		Open	1343 2A	13-18	480V			
		4	Bark to Pile conveyor Plow	E13-6079		Open	1337 5D	13-12	480V			

Checked All Local Start Buttons _____

Requires 2 signatures for system lockout and verification of isolation: _____ _____

Periodic Inspection

Periodic inspections of the Lockout Procedure will be conducted to ensure that the procedure and the elements of this program are being followed.

- A team comprised of representatives from various site departments will perform lockout inspections. The representatives shall be primary authorized employees other than the one(s) utilizing the energy control procedure being inspected.
- At least one application of the procedure for each basic type of energy isolating device (i.e. electrical disconnect, valve, blind/blank, blocking pin, etc.) and each basic type of locking device (i.e. lock, cable/chain, locking overcap for valve) will be observed annually.
- The inspection team must observe application of lockout procedures and talk to employees involved to determine:
    - Whether all steps of the procedure are being followed.
    - Whether the employees involved know their responsibilities.
    - Whether the procedures they follow are adequate and what changes should be made.
- The inspections must be documented and include the name of inspector(s); the names of the Authorized Employees, the date; department and job being observed; the machine/equipment on which the lockout procedure was being used, observations made and deficiencies identified. The Inspection Form will be completed by the authorized employee(s) conducting the inspection.
- The inspector(s) must submit a completed copy of the Inspection Form to the location's Safety Office.
- The Department being audited will review the Inspection Form. Where inadequacies or deviations are noted, corrective action will be taken and the authorized employees will be retrained. The retraining will be documented and a copy of the review form, revised procedure and attendance sheet will be submitted to HR.

TEMPORARY MODIFIED LOCKOUT SHEET FORM

No. of pages to be modified: _____ Equip/Asset to be locked: _____DATE: _____
Participants: _____ _____ _____ _____

- What is the reason for using the temporary modified sheet?
  - No existing sheet ❑ For Maintenance Needs ❑ Specific Operational need ❑
  - Valve already locked out ❑ Other ❑

    _____
- What type of temporary modified sheet do we need?
  - From a blank sheet ❑ Addition of devices ❑ Delete and/or change some devices ❑ Other ❑
- Jobsite tour completed? Yes ❑ No ❑
- Do we need to consult the process diagram(s)? Yes ❑ No ❑
- Do we need an additional resource person(s)? Yes ❑ No ❑
- Are there residual energies? Yes ❑ No ❑ If so, what are the appropriate control measures?
  - Electrical: Yes ❑ No ❑
    - If so, describe control measures: _____
  - Pneumatic: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Residual Pressure: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Kinetic: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Hydraulic: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Thermal: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Chemical: Yes ❑ No ❑
    - If so, describe control measures:

      _____
  - Radioactive: Yes ❑ No ❑
    - If so, describe control measures:

      _____
- Does the lock installer need to use specific PPE for the lockout (heat/chemical)? Yes ❑ No ❑
  - If so, specify: _____
- Does equipment need to be drained or flushed before being locked out? Yes ❑ No ❑
  - If so, are these steps included in the sheet? Yes ❑ No ❑
- Will there be any Line Breaking? Yes ❑ No ❑ If so, complete a Linebreaking Permit w/required PPE.
- Do we need to barricade parts of the work area based on the modifications to the Lockout Sheet? Yes ❑ No ❑
- Have the modified sheet signed by the Validators from the Area and an Approver from the Mill Area.

Validated by (1): _____ Validated by (2): _____
Approved by (Management level up): _____
Return all forms to the safety office once work is complete and/or updated lockout has been added to the LOTO Management System.

Revision 6-18-2019