

<b>JAGUAR ENERGY SERVICES, LLC</b> 310 N Parkerson Ave Crowley, LA 70526  Original Date of Implementation: October 2013 New Effective Date: Reviewed By: Jared Monk	<b>LOTO</b>   Plan Revision Date: TBD Page 1 of 38 Reviewed Date: 01/10/2022
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## Section 42.0 LOCK OUT/TAG OUT PROGRAM

### 1. PURPOSE

Because the Health and Safety of our employees are our top priority, **JAGUAR ENERGY SERVICES, LLC** has developed this Lock Out/Tag Out program.

This program is to establish requirements for isolating energy sources of machines, electrical systems, steam, hydraulic systems, tension, gravity, valves, and associated systems during installation, service, maintenance, repair, overhaul, testing, or any other situation that could result in unexpected energization, startup, or release of stored energy that could cause endangerment to personnel, as required by OSHA 29 CFR 1910.147.

### 2. SCOPE

**JAGUAR ENERGY SERVICES, LLC** has reviewed their total operation and equipment and has determined what equipment would require the use of the LOTO program.

Any electrical work were to be done on the existing systems in the office, storage buildings or shop would be contracted to a qualified electrician.

If this were to occur the contractor would be required to follow **JAGUAR ENERGY SERVICES, LLC's** electrical LOTO procedures as defined in this program.

Therefore, this procedure applies to all **JAGUAR ENERGY SERVICES, LLC** personnel while inspecting and/or doing work on client's equipment at the client's facility.

- .1 A review of **JAGUAR ENERGY SERVICES, LLC** worksites shows that their personnel are subject to perform work on the following **JAGUAR ENERGY SERVICES, LLC** owned and client equipment:
  - a. Pumps
  - b. Engines
  - c. Motors
  - d. Process Piping
  - e. Facility Process Equipment.

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- .2 In most cases when working at a client's location, their Lock Out/Tag Out procedure will be used.
  - a. In the event that the client has none, a site-specific procedure based on **JAGUAR ENERGY SERVICES, LLC's** procedure will be developed and utilized.
  
- .3 This procedure will be address:
  - a. Who controls it.
  - b. How program is enforced.
  - c. Specific procedures that outline the scope, purpose, authorization, rules, and techniques to be utilized.
  - d. Listing of the typical types and kinds of a client's equipment that **JAGUAR ENERGY SERVICES, LLC** personnel may be exposed to.
  - e. Training
  - f. Hazard assessment and development of site-specific LOTO Plan.
  - g. Inspections
  - h. Where unexpected energizing start up or release of stored energy could occur and cause energy.
  - i. Specific procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy.
  - j. Specific procedural steps for the placement, removal, and transfer of lockout devices or tagout devices and the responsibility for them.
  - k. Inspections
  - l. Revisions
  
- .4 **JAGUAR ENERGY SERVICES, LLC** claims no exemptions provided for construction, agriculture, maritime employment and/or oil and gas well drilling and servicing as in OSHA 29 CFR 1910.147.

### 3. Responsibilities

- .1 The Safety Coordinator or his/her designee is responsible for implementation and control the Lock Out/Tag Out procedure.
  - a. Additional responsibilities include:
    - 1. Ensuring that employees have completed the training required by this procedure
    - 2. Documentation of this training.

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3. Ensuring that a statement is in all customer and contractor agreements that **JAGUAR ENERGY SERVICES, LLC** Lockout/Tagout must be met.
  4. Audit the District Lock Out/ Tag Out Program yearly.
- .2 The Safety Director is responsible for providing assistance in the implementation of this Policy.
- a. Additional responsibilities include:
    1. Yearly evaluating the Program implementation to ensure its effectiveness.
    2. Make sure any necessary changes or updates are done.
    3. Ensure that all authorized employees are provided necessary lock out/tag out kits.
- .3 The Supervisor in charge of each project has been designated as the Authorized Person for that job and has the responsible for the implementation of this program.
- a. Additional responsibilities include:
    1. Ensure that all employees follow **JAGUAR ENERGY SERVICES, LLC's** Lock Out / Tag Out Program requirements.
    2. Personnel that violate this procedure will be subject to disciplinary action as per **JAGUAR ENERGY SERVICES, LLC's** Disciplinary Action Plan.
      - i. Supervisors have the responsibility of enforcing the Disciplinary Action Plan.
    3. Locking out and tagging out equipment and testing to ensure that all energy sources (primary and stored energy) are de-energized, de-pressurized, and or dissipated.
    4. Ensure that contractor or client provide their written Lock Out / Tag Out Program procedures.
      - i. That they are reviewed, and that they meet or exceed **JAGUAR ENERGY SERVICES, LLC** requirements.
      - ii. **JAGUAR ENERGY SERVICES, LLC** written program will be provided to customer and contractors when required.

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- .4 **JAGUAR ENERGY SERVICES, LLC** personnel are responsible for ensuring that they obtain the initial training on **JAGUAR ENERGY SERVICES, LLC** Lock Out/Tag Out Program.
  - a. Additional responsibilities include:
    - 1. Follow all established Program procedures.
- .5 Customer or contractor personnel involved in operations relating to equipment or machinery lockout that affects **JAGUAR ENERGY SERVICES, LLC** employees, must comply with their own procedures, or with **JAGUAR ENERGY SERVICES, LLC**'s procedures.
  - a. Customer management must authorize the disabling of equipment by having maintenance personnel audit and Lock Out/Tag Out the facilities being worked on to prevent an unsafe condition.

#### 4. Procedure

This procedure is being enacted to define and implement the specific activities that require the use of Lockout/Tagout Procedure.

- .1 Each time that **JAGUAR ENERGY SERVICES, LLC** personnel conduct work at a location that does not have a Lock Out/Tag Out Procedure, or in the event that they are at a remote location, **JAGUAR ENERGY SERVICES, LLC** person in charge will conduct a hazard assessment to develop a site-specific Lock Out/Tag Out Plan.
  - a. The site-specific LOTO Plan will address:
    - 1. Scope
    - 2. Purpose
    - 3. Control
    - 4. Authorization
    - 5. Rules
    - 6. Techniques to be used
    - 7. Means to enforce compliance
    - 8. Where unexpected energizing start up or release of stored energy could occur and cause energy.
    - 9. A specific statement of the intended use of this procedure

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10. Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy.
  11. Specific procedural steps for placement, removal and transfer of lockout devices or tagout devices and the responsibility for them.
  12. Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, and other energy controls measures.
  13. Training
  14. Inspections
  15. Revisions
- .2 Normal servicing and maintenance of equipment such as lubricating, cleaning, and making minor adjustments that do not require the removal of the machine guards or reaching beyond the guards, does not require the use of this Lock Out/Tag Out Procedure.
- .3 All employees shall be informed, trained, and required to use this program.
- .4 Operations process personnel may close and open valves for operational purposes without tagging when work is not to be performed on equipment.
- .5 Equipment or machines which may be disconnected by removing a plug with an attached cord, does not require the use of Lockout/Tagout, if the plug is removed and under the exclusive control of the person performing the servicing or maintenance.
- a. Methods of control may include a lockout device in the plug, or the plug shall be visible to the worker and within arms reach.
- .6 In the event that **JAGUAR ENERGY SERVICES, LLC** personnel are working in a client's facility they will follow the procedure of the client, as long as it meets or exceeds that of **JAGUAR ENERGY SERVICES, LLC**.
- .7 All machinery/equipment capable of being locked out must be locked out.

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- .8 Contractors must follow all applicable Country, State, and Local Regulatory Agency programs including the Lock out / tag out procedures.
- .9 The **JAGUAR ENERGY SERVICES, LLC** person in charge will review the host employer's LOTO Program and make them aware of **JAGUAR ENERGY SERVICES, LLC's** Lock Out or Tag Out Procedure.
- .10 If the survey indicates the need for the use of **JAGUAR ENERGY SERVICES, LLC's** Lock Out/Tag Out procedure, the procedures will be implemented.
- .11 All employees shall follow this procedure to ensure that the machinery and, or, other associated equipment is isolated from all potentially hazardous energy sources.
  - a. Equipment should be Locked Out or Tagged Out before any services are performed during installation, commissioning, service, maintenance, repair, overhaul, testing, or any other situation that could result in unexpected energization, startup, or release, of stored energy.
- .12 A Lock Out/Tag Out procedure assessment form can be found on Appendix B.
- .13 **Affected Employee**  
 Affected Employee is an employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under Lock Out or Tag Out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
  - a. **JAGUAR ENERGY SERVICES, LLC** affected Employees are:
    - 1. Dispatcher
    - 2. Blaster
    - 3. Painter
    - 4. Helper
  - b. Affected employees will be notified by **JAGUAR ENERGY SERVICES, LLC** or authorized employee of the application before the device is applied and after the removal of lockout or tagout devices.

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- .14 Authorized Employee**  
An Authorized Employee is the only person who can lock or implement a Lock Out /Tag Out system procedure on machines or equipment so that servicing or maintenance on that machine or equipment may be performed.
- a. An authorized person and an affected person may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment that have a Lock Out/ Tag Out system implemented.
  - b. **JAGUAR ENERGY SERVICES, LLC** Authorized Employees are:
    1. Superintendent
    2. Foreman
- .15 Others**  
Others are personnel who are required to work in an area where energy isolation is in place.
- .16** Each new or transferred affected employee and any other employee whose work operations are, or may be, in the area will be instructed in the purpose and use of the Lock Out/Tag Out procedure.
- .17** Customer Management must authorize the disabling of equipment by having maintenance personnel audit and Lock Out/Tag Out to prevent an unsafe condition.
- .18 Lock Out/Tag Out Equipment**  
Whenever major replacement, repair, renovation, or modification of machines or equipment are performed, and whenever new machines or equipment are installed, energy isolation devices for such machines shall be designed to accept a lockout device if applicable.
- a. The preferred method to isolate energy sources is with both lock and tag.
  - b. In the event of a device not being capable of lock out, tags may be used as long as all employees in the area are notified that only tag out has been used.
    1. Note: Tags are warning devices and do not provide physical restraint like a lock.
  - c. **JAGUAR ENERGY SERVICES, LLC** shall provide all:
    1. Blinds

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2. Locks
3. Tags
4. Chains
5. Wedges
6. Key blocks
7. Adapters pins
8. Self- locking fasteners
9. Other hardware to be used for isolating, securing, or blocking of machines or equipment from energy sources.
- d. Locks checked out to authorized employees who are to work on the equipment shall become the personal lock of that individual, until it is removed by the individual who installed it and the lock is checked back in.
- e. Locks, tags, and uniquely identified seals used for the purpose of Energy Lockout/Tagout shall:
  1. Not be used for other purposes within the facility.
  2. Be the only devices used for controlling energy.
  3. Be singularly identified.
- f. Lock Out/Tag Out equipment shall be standardized within **JAGUAR ENERGY SERVICES, LLC** in at least one of the following criteria:
  1. Color
  2. Shape
  3. Size
- g. Additionally, Tag Out devices shall be standardized in print and format.

## .19

### Lock Out Devices

A Lockout Device is 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.

- a. Included are blind flanges and bolted slip blinds.
- b. Lock Out devices shall:
  1. Be singularly identified, and the only device used for controlling energy.
  2. Not be used for any other purpose.
  3. Durable and capable of withstanding the environment to which they are exposed for the length of time that exposure is expected.



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4. Be substantial enough to prevent removal without use of excessive force or unusual techniques, such as removal by bolt cutters.
5. Be identifiable indicating the employee applying the device.
6. Be so designed as to have the availability to mark or write on it to identify the employee applying the device.
7. Be constructed and painted so that exposure to weather conditions or wet damp locations will not cause the tag to deteriorate, or the message on the tag to become illegible.
8. Lockout devices will be constructed so they will not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.
9. Standardized locks of the same shape and size shall be sequentially numbered without the numbers being repeated.

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#### **Tag Out Devices**

If an energy source can not be locked out a Tagout system shall be utilized.

- a. A Tagout Device is a prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure.
  1. This will show that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
- b. Tag Out Devices must be weather and chemical resistant.
- c. Tag Out Devices shall:
  1. Be standardized in size and color
  2. Be of the same print and format.
  3. Contain a warning against hazardous conditions if the machine or equipment is energized.
  4. Include a legend such as the following:
    - i. Do Not Start.
    - ii. Do Not Open.
    - iii. Do Not Close.
    - iv. Do Not Energize.
    - v. Do Not Operate.

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5. Be legible and understandable by all employees in the work area.
6. Be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
7. Be a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds, and having the general design and basic characteristics of being at least equivalent to a one-piece, all environmental-tolerant nylon cable tie.
  - i. Tagout devices will be substantial enough to prevent inadvertent or accidental removal.
8. Be constructed and printed so that exposure to weather conditions or wet, damp locations will not cause the tag to deteriorate nor the message to become illegible.
9. Not deteriorate when used in a corrosive environment.
10. State:
  - i. The reason for the Tagout
  - ii. Name of employee who installed the Tagout Device.
  - iii. How that person can be reached
  - iv. The date and time the tag was put in place.

## **.21 Preparation for Shutdown**

When equipment that is to be worked on has the potential for shifting, falling, starting in motion, or otherwise operating inadvertently, a physical device such as a wedge, bar, hoist, key block, adapter pin, etc., shall be in position to prevent such occurrence.

- a. Before an authorized or affected employee turns off a machine, equipment, or system, the authorized employee shall:
  1. Have the knowledge of the type and magnitude of the energy
  2. The hazards of energy to be controlled
  3. The methods or means to control the energy.
- b. Whenever the device is not in the immediate control of the authorized employee for the work being performed, a

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- tag shall be attached to the device identifying its purpose and signed by the person in charge of the work.
- c. Machines or other equipment that is powered with pneumatic or hydraulic sources, must be tested to determine that the lockout device installed to prevent the machine or other equipment from operating has effectively served its purpose.
- d. Trip levers, switches, valves, etc., used to actuate machines must be locked in the appropriate position by the use of pins, locks, chains, wedges, key blocks, etc.
- e. All actuating devices must be tagged prior to working on the machine or the equipment.

#### **.22 Machine or Equipment Shutdown**

When shutting down machines or equipment, an orderly shutdown must be utilized to avoid any additional or increased hazards to the employee or equipment as a result of the equipment stoppage.

- a. Machines and equipment will be shutdown using:
  - 1. **JAGUAR ENERGY SERVICES, LLC** operating procedures
  - 2. Procedures recommended the manufacturer

#### **.23 Isolation of Machines and Equipment**

All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

#### **.24 Preparation for Lock Out Or Tag Out**

A safety meeting shall be held with all affected personnel to complete:

- a. A Job Safety Analysis
- b. A Hazard Assessment
- c. Review general instructions for Lock Out / Tag Out.
  - 1. In addition, identify all hazardous energy sources, and obtain necessary locks/tags and devices to implement the lock out / tag out.
  - 2. The authorized employees will notify affected employees whenever a lockout or tag out will occur, as well as when the equipment is being placed back in service.

### **WARNING**

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**Do not attempt to operate any switch, valve, or other energy-isolating device where it is locked or tagged out. JAGUAR ENERGY SERVICES, LLC's disciplinary procedures apply to violation of the Lock Out / Tag Out Program.**

**.1 Sequence For the Application of Energy Control**

The established procedures for the application of energy control shall cover the following elements and shall be done in sequence.

- a. Preparation for Shutdown
  1. Before the authorized or affected employee turns off or shuts down the machine or equipment, the authorized employee shall have knowledge of the type and magnitude of energy the hazards of the energy to be controlled, and the methods or means to control the energy.
- b. Machine or Equipment Shutdown
  1. The machine or equipment shall be turned off or shut down using the procedures established for the machinery or equipment.
  2. An orderly shutdown must be utilized to avoid any additional or increased hazards to employees as a result of the equipment stoppage.
- c. Machine or Equipment Isolation
  1. All energy isolating device(s) that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.
- d. Lockout Tagout Application
  1. Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating device in a safe position.
  2. Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of the energy isolating device from safe to off position.
  3. Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.
  4. Where a tag cannot be affixed directly to the energy isolating device, the tag shall be

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located as close as safely possible to the device position that will be immediately obvious to anyone attempting to operate the device.

- e. **Stored Energy**
  - 1. Following the application of lockout or tagout devices to energy isolating devices, all stored energy (such as that in hydraulic systems, air, fuel, gas, steam, springs or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, and otherwise rendered safe.
  - 2. If there is a possibility of reaccumulation of stored energy level, verification of isolation shall be continued until the servicing or maintenance is completed or until the possibility of such accumulation no longer exists.
- f. **Verification of Isolation**
  - 1. Prior to starting work on machines or equipment that has been shut down and lock or tagged out the authorized employee will verify isolation and deenergization of the machine or equipment has been accomplished.

**.2 Restoring Machines or Equipment to Normal Production Operations** After the servicing and/or maintenance is complete and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.

- a. Prior to removing lockout devices and tags, the person responsible for starting up the equipment shall verify the completion of work and notify the affected personnel who normally work in the area of the equipment.
- b. After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout or tag out devices.
- c. Operate the energy isolating devices to restore energy to the machine or equipment.

**.3 Testing or Positioning of Machines, Equipment, or Components.**

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At times, it is recognized that machinery or associated equipment must be energized or pressurized for operational functional testing and adjustment of the equipment.

- a. In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:
  1. Clear the machine or equipment of tools and materials.
  2. Remove employees from the machine or equipment or possible points of contact with energized parts.
  3. Remove the lockout or tagout device.
  4. Energize and proceed with testing or positioning.
  5. De-energize all systems
  6. Reapply energy control measures and continue servicing or maintenance.

.4 This procedure shall be documented with the following:

- a. Person performing the test.
- b. Authorized employee in charge of lockout/tagout measures.
- c. Who verifies the test.

#### **.5 Authorization for Lock Out / Tag Out removal**

When the authorized employee who applied the Lock Out or Tag Out device is not available to remove it, that device may be removed under the direction of the Client Representative.

- a. The specific procedure shall include at least the following elements:
  1. Verification by the Client Representative that the authorized employee who applied the device is not at the facility.
  2. Make all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tag out device has been removed.
  3. Ensure that the authorized employee has this knowledge before he/she resumes work.

#### **.6 Procedure Involving More Than One Person (Group Procedure)**

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This section of the Lock Out/Tag Out Procedure will be reviewed with all personnel affected or authorized by the group Lock Out/Tag Out before implementation of that job.

- a. One authorized employee will be designated.
  1. This person will have the primary responsibility for a set number of employees working under the protection of the group lockout or tagout device.
- b. The authorized employee will ascertain the exposure status of the individual group members.
  1. The work to be performed and procedures will be identified and reviewed with each group member.
- c. If more than one crew, craft, department, etc., is involved, one authorized employee will coordinate the Lock Out/Tag Out to ensure that all control measures are applied.
  1. This will afford the group of employees a level of protection equal to that provided by a personal lockout or tagout device.
- d. Authorized employees responsible for keys controlling multiple lockout locks may keep them in a lock box under his/her control, with a single lock installed on the box with the individual by himself.
- e. Each authorized employee will affix the Lock Out/Tag Out device to the group lockout.
  1. Each lock must have that person's name affixed to it.
  2. Each authorized employee will remove their lockout or tag out device, when they stop working on the equipment or machine being serviced (work completed or reassigned).

## **.7 Authorized Personnel Changes**

When work on equipment that is locked out or tagged out extends to more than one shift or authorized employees are relieved, control of the lockout system for that specific equipment shall be passed to another authorized employee to ensure the continuity of the Lockout/Tagout procedure.

- a. The following conditions have been satisfied.
  1. This may be done when the work is intended to be finished by the tech on the following shift, and with written turnover instructions as to the work needed to finish the job.
  2. This will include:

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- i. Re-testing to ensure de-energized state of equipment or machinery being serviced.
- b. Documentation on this procedure should be specific.

#### **.8 Changes in the Job**

All lockout or tagout devices must be removed from each energy isolating device by the employee who applied the device.

- a. When an authorized employee is relieved or ends a shift, he/she shall review each job under his/her authority which is controlled by lockout/tagout with the person who relieves them.
- b. The authorized employee coming on shift shall install a personal lock and tag on each energy isolation device, when applicable, and the authorized employee being relieved shall remove their lock and tag from the locked out electrical equipment.
- c. The authorized employee coming on shift will verify all of the affected employees covered by the permit, and shall have any new affected employees sign the back of the permit prior to their starting work.
- d. Whenever affected employees other than the authorized employee are relieved or change shifts, the authorized employee shall verify the change by marking their name off of the permit and initialing the entry.
- e. When process personnel change shifts, the authorized employee shall review the Energy Isolation Work Permit and shall verify the isolation locations with the new operators by signing the lists.
- f. The authorized employee coming on shift shall verify his/her control over the job by signing the active permit(s) covering the work.
- g. The operator leaving the shift will cosign the Energy Isolation Work Permit verifying that control is being passed to the operator coming on shift.

#### **.9 In the event that the employee who applied the lockout or tagout is not available, the lockout or tagout may be removed if:**

- a. It is under the direction of the employer.
- b. It follows the documented removal protocol.
- c. It is verified by the employer that the authorized employee who applied the device is not at the facility.



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- d. After making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed.
- e. It is assured that the authorized employee has this knowledge before he/she resumes work at the facility.

#### **.10 Double Block and Bleed and Blind Flange**

Two methods are available for Lock Out/Tag Out, Double Block and Bleed, and Blind Flange installation.

- a. When double block valves with a pressure bleed valve in between is used in lieu of blinds, both block valves must be locked and tagged in the closed position and the bleeder must be locked and tagged in the open position.
- b. **Blinds.**
  - 1. When blinds are used to isolate a process system, the blind must be bolted in place and tagged accordingly.
  - 2. All blinds must be recorded on the customers Blind Master List.

#### **.11 Sand Blasting Equipment Lockout/Tagout Procedure**

When work is to be done on sandblasting equipment such as pressurized sand hopper, hoses and/or associated equipment the following procedure will be utilized. All forms of energy such as electricity, magnetic, compressed gas/air, pressurized liquids, heat, gravity, and springs under tension.

- a. The Authorized Employee will notify all Affected Employees, paint inspector and the client of the process to be done.
- b. All activities associated with the operation will be stopped.
- c. The Authorized Employee will fill out the LO/TO form.
- d. To isolate the energy from the air source by:
  - 1. Shutting down the air compressor by turning off the key
  - 2. Removing the key
  - 3. Locking control panel in the closed position.
  - 4. Turning off the main air valve
  - 5. Locking the main air valve in the off position from the air compressor.
    - i. If that cannot be done, turn off the air compressor and disconnect the main hose.

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- e. Ensure that NO air is trapped in the lines or hopper and insure that the unit cannot be repressurized.
- f. Release all restricted air.
- g. Proceed with repairs or work to be done on the related equipment.
- h. When all repairs or work on the associated equipment is completed, the Authorized Employee will check the equipment to ensure:
  - 1. That the equipment is free of any tools, unused parts or other objects.
  - 2. That all personnel are away from the equipment.
  - 3. The equipment can safely be started.
  - 4. This process will be confirmed with the equipment operator, paint inspector and client.
- i. The Authorized Employee will sign off on the LO/TO permit and remove the LO/TO device.
- j. The operator will reactivate the unit.
- k. All parties will check the unit for safe operations before blasting is resumed.
- l. Allow all personnel to return to normal operation of the equipment.
- m. File and turn in a copy of the completed LO/TO form to the office.

Note:

**In the event that an emergency or equipment failure should occur, shut off the main air valve from the air compressor. Immediately stand down all personnel working with the associated equipment.**

#### **.1 Process Equipment Lock Out Tag Out**

Prior to implementing the Energy Lock Out/Tag Out Procedure for specific equipment, the client representative and/or **JAGUAR ENERGY SERVICES, LLC** person in charge will issue Work Permits to perform routine mechanical work such as installation of drain lines, steam out and purge connections, or to install scaffolds or work platforms, for the purpose of enabling future mechanical work providing the work does not involve opening of equipment with stored energy sources.

- a. Only authorized customer personnel shall perform process equipment shutdown.
- b. Authorized customer personnel and/or the Field Service Person in charge shall:
  - 1. Lock and tag all process equipment valves used for the purpose of isolating stored energy sources, in the closed position.

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2. They will be tagged with:
  - i. The signature and date
  - ii. Recorded on the Energy Isolation Work Permit.
  - iii. DO NOT REMOVE/DO NOT OPERATE tag.
- c. When double block valves with a bleeder in between are used in lieu of blinds, both block valves must be locked in the closed position and the bleeder locked open and recorded on the Energy Isolation Work Permit.
- d. When blinds are specifically used to serve as a stored energy isolation device, the blind must be bolted in place and tagged and recorded on the Energy Isolation Work Permit.
- e. Process equipment shall be shutdown and prepared for mechanical work by the operators or other personnel authorized by the client.
- f. Redundant valve closing shall be performed until the equipment is isolated from its energy source.
- g. All potentially hazardous stored or residual energy will be relieved, isolated, drained, emptied, purged, depressurized, and otherwise rendered safe, prior to issuing permits to authorized employees to open the process equipment for maintenance or turnaround.
  1. Bleeders, where available, shall be used to verify the isolation.
  2. When bleeders are not available within the system being isolated, special precautions for opening flanges to verify isolation shall be used.
- h. Process personnel, or the authorized employee, shall verify the isolation of the equipment by identifying all locations where blinds or Lock Out Devices are installed.
- i. If there is a possibility or indication of reaccumulation of stored energy level, verification of isolation shall be continued until servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.
- j. Prior to starting work on the machine or equipment that has been locked or tagged out, the authorized employee shall verify that the isolation and deenergization of the machine or equipment has been accomplished.
- k. The mechanical person signing the Energy Isolation Work Permit shall be specified as the authorized person for all other mechanical employees working under the authority of that specific permit.

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1. The authorized employee specified on the permit shall:
  - i. Be responsible to review and ensure that the operator has installed a DO NOT REMOVE BLIND tag on each blind installed, and record the installation on the Master Blind List.
  - ii. Display the permit in a prominent location at the work site, and instruct each person on the crew as to the posting location.
- l. Isolation valves may not be operated (opened) during the time there is an active Energy Isolation Work Permit covering energy source isolation.
- m. When more than one person works under a specific Energy Isolation Work Permit, the authorized employee specified on the permit shall inform each person working in the crew of the energy isolation locations and shall instruct them on the job requirements.
  1. Each crew member shall sign the Energy Isolation Work Permit.
- n. When all mechanical work on the process equipment is completed and prior to removing any blinds or opening any of the block valves used for energy isolation, the authorized person shall tour the job site and verify that work on the process equipment has been completed and the equipment is ready to be prepared for startup.
- o. Authorized customer personnel and/or the Field Service Person in charge, shall supervise the removal of all blinds, locks and tags on process equipment valves used for the purpose of isolating stored energy sources.
- p. The authorized employee shall fill in the STATUS section of the permit.
- q. The authorized employee in charge of the work shall record the removal of each blind on the Master Blind List, and shall collect the DO NOT REMOVE BLIND tags from each location and shall void and return the tags to the operator when the permit is returned.
- r. After all lockout or tagout devices have been removed and before a machine or equipment is started, all affected employees must be notified that lockout or tagout devices have been removed.
- s. The authorized employee specified on the Energy Isolation Work Permit shall inform all the personnel covered on the permit when the permit is made inactive.

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1. Work shall cease at that point.
2. The authorized employee shall return the permit to the operator on shift, and shall sign the permit in the STATUS section and show the date and time the permit was signed out.
3. The work area will be inspected to ensure that nonessential items have been removed, and to ensure that machine or equipment components are operationally intact.
4. The work area will be checked to ensure that all employees have been safely positioned or removed.
- t. The authorized employee shall return the permit to the operator on shift and shall:
  1. Sign the permit in the Status Section
    - i. Show the date and time the permit was signed out.
- u. The authorized employee in charge of the crew shall inform all members of the crew of the energy isolation locations and sign the permit as so indicated.
- v. The operator shall verify that each blind has been removed prior to starting the equipment.
- w. The Energy Isolation Work Permit and MASTER BLIND LIST shall be reviewed by the operator on shift who shall record the status of the work, date and time and shall pass the signed completed list to the Client's Representative in charge of the equipment for review.

## **.2 Electrical Energy Isolation.**

Live parts of electrical equipment operating at 50 volts or more must be guarded against accidental contact.

- a. Safe work practices must be adhered to, including de-energizing and the Lock Out/Tag Out of electrical equipment before inspecting or making repairs.

## **.3 Electrical Source Isolation**

Electrical Lockout/Tagout is a procedure which requires an electrical circuit to be de-energized from all sources of electrical power and the main breaker to be locked in the off position.

- a. Wiring Disconnect is the physical separation between electrical wires and the energy source they are normally connected to.
- b. In cases where there are Start-Stop Stations remote from the equipment and/ or when there is no Start-Stop Station

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- at the equipment, the proper WIRING DISCONNECT procedures must be followed.
- c. Electrical power sources must be turned off and locked out in accordance with the following procedures. When maintenance or repairs are performed on electrically powered equipment other than electrical lighting circuits of 120 volts or circuits less than 100 volts, which are not required to be locked or tagged out for routine maintenance.
  - d. Qualified electricians may work on energized electric circuits within the procedures established for such work, and under the authority of the Client Representative in charge.
  - e. Equipment must be shut down at the local start-stop station or local Hand Off-Auto switch where provided.
  - f. The person responsible for shutting down the equipment shall place the equipment breaker switch in the "off" position, and then install a lock and a completed signed and dated "DO NOT OPERATE" tag.
  - g. Before work is performed on locked-out and tagged-out equipment, an Energy Isolation Work Permit shall be issued to an authorized employee responsible for the work.
    1. A lock and tag designated as an energy isolation device must be applied to the electric switch at the breaker.
  - h. Prior to starting to work on the equipment, the person who shuts down the equipment and the person who is to work on the equipment, shall test the local start-stop station switch, when equipped, to verify that the breaker is de-energized.
  - i. The number and/or identification of the locked-out equipment and lock number shall be logged on the Energy Isolation Work Permit by the person responsible for shutting down and starting up the equipment.
  - j. Locks and tags shall be removed only by the person who installs them.
  - k. When the person who applied the lockout or tagout device is not available to remove them, the devices may be removed under direction of Client Representative in charge when the following conditions have been satisfied:
    1. The Client Representative shall verify that the person who installed the Lock Out/Tag Out device is not at the facility.

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2. Make all reasonable efforts to contact the authorized employee to inform him /her that his/her Lock Out or Tag Out device has been removed.
  3. Prior to removing an individual's Lock Out/Tag Out device in their absence, the Field Service Person performing work and the Client Representative responsible for starting up the equipment, shall verify in writing that the Lock Out/Tag Out device may be removed.
  4. The written authorization shall be posted on the Energy Isolation Work Permit.
  5. The operator may serve as the alternate for the Client Representative in his/her absence, and when the status of the work has been verified with the equipment operator.
  6. The person whose Lock Out/Tag Out device is removed in their absence, shall be informed by their Client Representative of the action prior to the employee's return to the area where work was performed.
- l. The person responsible for starting up the equipment shall check the work area for nonessential items, and to ensure that the equipment and its components are operationally intact and safeguards have been installed, if applicable.
  - m. The work area shall be checked by the person responsible for starting up the equipment, to ensure that all personnel are located safely away from the equipment.
  - n. Affected and other employees who are normally expected to work in the area of the equipment, shall be notified that the Lock Out/Tag Out devices are going to be installed or removed prior to either action being taken.
  - o. The person responsible for starting up the locked-out equipment shall proceed with startup after the authorized person has removed his/her lock.
  - p. The person responsible for starting up the equipment shall record on the Energy Isolation Work Permit the date and time of removal of their Lock Out/Tag Out device, and shall verify such by signing their signature.

#### **.4 Wiring Disconnect**

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- a. Wiring shall be disconnected in addition to the application of Lock Out/Tag Out devices when certain specific tasks are performed.
  1. When work is performed inside of equipment such as cooling tower bays, fin fan coolers, tanks with power mixers, filters, desalters, etc., or on equipment not equipped with local start/stop switches, wiring shall be disconnected at both the breaker and locally at the motor.
  2. When work is performed on rotating equipment and physical contact may be made with the normally rotating parts, the wiring shall be disconnected at the breaker only.
- b. The operator, or person responsible for shutting down the equipment, shall place the breaker switch in the off position.
- c. In cases where there are start/stop stations remote from the equipment, the operator, or person responsible for shutting down the equipment, shall notify the Client Representative on all other affected process units and require them to place DO NOT OPERATE tags on all remote switches which normally would energize the equipment.
- d. After the equipment has been shut down, an Energy Isolation Work Permit shall be issued by an authorized employee, and the circuit is determined to be clear by use of a voltage tester and to disconnect the wires.
- e. Following the return of the Energy Isolation Work Permit to the person verifying that the electric circuit is de-energized, the operator will install a lock and WIRING DISCONNECT TAG on the breaker locking it in the open (off) position.
- f. The completed Energy Isolation Work Permit verifying the wiring disconnect, shall be posted in a conspicuous place and remain until the project is complete.
- g. After the Client Representative has locked out and tagged the breaker switch, proper ELECTRICAL SOURCE ISOLATION procedures shall be followed for work performed on electrically powered equipment.
- h. When work on the equipment is complete and a qualified electrician has reconnected the wires, all lock out devices and tags may be removed by the authorized employee in charge.



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**.5 2300 and 4160 Volt Motor Lockout**

- a. When work is to be performed on electrical systems consisting of 2300 volts or greater, both the person responsible for shutting down the equipment and the Client Representative, or his/her alternate, shall sign the Energy Isolation Work Permit prior to any electrical work being performed.
- b. When work is to be performed on electrical systems consisting of 2300 volts or greater during hours when the Client Representative is not scheduled at work, the Field Service Person may sign the Energy Isolation Work Permit in his/her absence following consultation with the Client Representative or his/her alternate.
- c. After the Energy Isolation Work Permit has been properly signed and the equipment has been shut down, the electrician shall turn off the breaker and retract the motor starter and/or remove the fuses which electrically isolate the equipment.
- d. The person responsible for starting up the equipment and an electrician shall inform the authorized employee, and he will install his/her locks and tags on the multiple lockout device on the motor breaker switch.
- e. All authorized employees who work on the locked out equipment shall install their locks on the equipment.
- f. Before any equipment is to be returned to service, authorization to work shall be obtained from the Client Representative.
- g. The person responsible for starting up the equipment and the electrician shall notify the authorized employee, and he shall remove his/her lockout/tagout devices.
- h. The electrician may reinstall the motor starter when appropriate.
- i. All sources of energy must be considered.
- j. Electrical equipment must be isolated at the primary energy source, i.e., locked and tagged out in the de-energized state at the disconnect switch for a control panel or electrical control circuit, or a circuit breaker for a motor or motor starter.
- k. Immediately prior to, and after Lock Out/Tag Out of an electrical circuit, the circuit shall be tested with a functional voltmeter set on the appropriate scale to confirm that the circuit has been de-energized.
- l. After Lock Out/Tag Out has been completed, a restart of the equipment shall be attempted to confirm Lock Out/Tag Out.

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## **.6 Audits And Inspections**

Annually the Safety Director, who will never be involved in the Lock Out/Tag Out procedure being inspected, will conduct an audit of the Lock Out/Tag Out procedure to ensure procedures and requirements are being followed.

- a. A certified review of the inspection will be documented and will include:
  1. The identification of the machine or equipment on which the energy control procedure was being utilized.
  2. The date of the audit.
  3. The employees included in the audit.
  4. The person performing the audit.
- b. Any deficiencies in the procedure will be identified and corrected.
- c. Action steps resulting from the audit will be recorded and reviewed.
- d. The Safety Coordinator will review and certify this audit.
- e. The purpose of the audit shall be to identify deviations or inadequacies in the Lock Out/Tag Out Procedure with recommendations for correction.
  1. Periodic inspection of the system shall be performed by designated personnel at intervals of not less than quarterly, to determine that the procedures are being followed and effectively working.
  2. The designated employee conducting the inspection will observe the actual implementation of the Lock Out/Tag Out Procedure.
  3. Deficiencies or deviations recorded during the inspection shall be noted along with recommendations for corrective action.
  4. Corrective actions such as retraining or procedure changes will be implemented.

## **.2 Training Requirements**

Initial training will be provided at the level required for the expected task to be performed, to enable employees to understand the purpose and use of the Energy Lock Out/Tag Out Procedure.

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- .1 Training curriculum for other employee.
  - a. Other employees whose work operations are or may be in an area where energy control procedures may be utilized/instructed about:
    1. The procedure
    2. Never remove a tag or lock/out device without authorization.
    3. A tag is never to be ignored or defeated in any way.
    4. The prohibition relating to attempts to restart or reenergize machines or equipment which are locked out.
    5. Limitations of tags and lockout devices.
    6. Tags are a warning device and do not provide physical restraint.
    7. Recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the work place, and the methods and means necessary for energy isolation and control.
    8. **JAGUAR ENERGY SERVICES, LLC** Lock Out/Tag Out Program.
  
- .2 Training curriculum for affected employee.
  - a. All employees shall be instructed in purpose and use of the energy control procedure.
  - b. Never remove a tag or lock/out device without authorization.
  - c. A tag is never to be ignored or defeated in any way.
  - d. The prohibition relating to attempts to restart or reenergize machines or equipment which are locked out.
  - e. **JAGUAR ENERGY SERVICES, LLC** Lock Out/Tag Out Program.
  - f. Regulatory Compliance Requirements.
  - g. Safe application, usage, and removal of energy controls.
  - h. Recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the work place, and the methods and means necessary for energy isolation and control.
  - i. Personal and Group Lock Out/Tag Out Procedures.
  - j. Safe Work Permit System Requirements.
  - k. **JAGUAR ENERGY SERVICES, LLC** Lock Out/Tag Out Program.

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- .3 Training curriculum for authorized employee.
- a. All employees shall be instructed in purpose and use of the energy control procedure.
  - b. Never remove a tag or lock/out device without authorization.
  - c. A tag is never to be ignored or defeated in any way.
  - d. The prohibition relating to attempts to restart or reenergize machines or equipment which are locked out.
  - e. Limitations of tags and lockout devices.
  - f. Tags are a warning device and do not provide physical restraint.
  - g. **JAGUAR ENERGY SERVICES, LLC** Lock Out/Tag Out Program.
  - h. Regulatory Compliance Requirements.
  - i. Safe application, usage, and removal of energy controls.
  - j. Recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the work place, and the methods and means necessary for energy isolation and control.
  - k. Personal and Group Lock Out/Tag Out Procedures.
  - l. Safe Work Permit System Requirements.
  - m. Categories of Energy Sources.
  - n. Method for Tag Out.
  - o. Method for Lock Out and Tag Out for Electrical Sources .
  - p. Method for Lock Out/Tag Out for Process Equipment.
  - q. Personal and Group Lock Out/Tag Out Procedures.
  - r. Equipment Shutdown/Start-up.
  - s. Equipment Check Following Maintenance or Repairs.
  - t. Review of 29 CFR 1910.147 Title 8 Section 3314 "The Control of Hazardous Energy" requirements.
  - u. ANSI Z244.1-1982, A Lockout / Tag out of Energy Sources - "Minimum Safety Requirements.
  - v. NFPA 70E, A Standard for Electrical Safety Requirements for Employee Workplaces.
  - w. How to isolate machinery and associated equipment for Lock Out/Tag Out.
  - x. Conditions for restarting machinery/equipment or removing tags.
- .4 Specific training requirements on tags
- a. Tags must be legible and understandable by authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.

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- b. Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- c. Tags may invoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- d. Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

.5 The certifications of the employee training and retraining will be kept up to date.

- a. The employee training certification will include:
  - 1. Employee's name.
  - 2. Employee's social security number.
  - 3. Date of training.

### **.3 Training Frequency**

- .1 All personnel will be trained according to the following schedule:
  - a. Initially upon hire the Lock Out/Tag Out training shall be provided to affected employees as part of orientation.
  - b. Authorized employees (new, transferred, or others) will receive training prior to their initial involvement with any lockout or tag out operation.
  - c. Retraining shall be provided whenever:
    - 1. There is a change in the Energy Lock Out/Tag Out Procedure.
    - 2. When an audit reveals that there are deviations.
    - 3. When management has reason to believe that there are inadequacies in the employee's knowledge or use of the Energy Lock Out/Tag Out Procedure.
    - 4. There is a change in:
      - i. Their job assignments.
      - ii. Machines or equipment.
      - iii. The process that presents a new hazard.
      - iv. In **JAGUAR ENERGY SERVICES, LLC's** Lock Out/Tag Out Program.

### **.4 Definitions**

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- .1 **Affected Employee** is 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 tag out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
  
- .2 **Authorized Employee** is a person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.
  - a. An affected employee becomes an authorized employee, when that employee's duties include performing, servicing, or maintenance covered under this section.
  
- .3 **Primary Authorized Employee** is a person who is accountable for other personnel covered by a specific Safe Work permit which he/she signs which has locked out/tagged out equipment specified on the permit.
  
- .4 **Capable Being Locked Out** means an energy-isolating device is capable of being locked out if it has a means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it, or through use of a lockout device.
  - a. 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.
  
- .5 **Energy Source** is any source:
  - a. Electrical
  - b. Mechanical
  - c. Hydraulic
  - d. Pneumatic
  - e. Chemical
  - f. Thermal
  - g. Other energy
  
- .6 **Energized** means connected to an energy source, or containing residual or stored energy.
  
- .7 **Energy Isolating Device** is a mechanical device that physically prevents the transmission or release of energy, including but not limited to, the following:

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- a. A manually operated electrical circuit breaker.
- b. A disconnect switch.
- c. A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors.
  - 1. In addition, no pole can be operated independently
    - i. A line valve.
    - ii. A block.
    - iii. Any similar device used to block or isolate energy.

**.8 Lock** is a key operated device that is substantial and durable, with tag out name, employee name, and telephone number.

- a. Locks *shall not* be used for any other purpose, i.e. personal lockers, etc.
- b. Contractor's locks must have identification of contractor, and phone number.

**.9 Personalized Lock** are locks specified as plant energy isolation devices, which are keyed differently from any other lock with only one key for each lock and both the key and lock are maintained by an individual, while it is serving as a lockout device.

**.10 Lockout** is 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.

**.11 Lockout Device** is a device used to hold an energy-isolating device in a safe position and prevent the energizing of a machine or equipment.

- a. Included are:
  - 1. Blank flanges
  - 2. Bolted slip blinds
  - 3. Valve wheel covers
  - 4. Cables
  - 5. Chains
  - 6. Ball and gate valve lockouts
  - 7. Plug lockout
  - 8. Circuit breaker clips

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- .12 Energy Isolation Work Permit** is a Permit to work on process systems or process equipment with known or unknown sources of stored energy.
- a. The permit will include:
1. The area identification
  2. Equipment
  3. Purpose
  4. Start time out of service.
  5. User
  6. Time back in service.
- .13 Normal Operations** is the utilization of a machine or equipment to perform its intended function.
- .14 Process Operator** is an operator responsible for starting up, operating, and shutting down process equipment.
- .15 Qualified Instrument Craft Personnel** are technicians that may open energized instrument panels for the purpose of calibration and repairs when the electrical energy is 120 volts or less.
- .16 Servicing and/or Maintenance** are workplace activities such as:
- a. Constructing
  - b. Installing
  - c. Setting up
  - d. Adjusting
  - e. Testing
  - f. Overhaul
  - g. Repair
  - h. Inspecting
  - i. Modifying
  - j. Maintaining and/or servicing turbo machinery or equipment.
1. These activities include:
- i. Servicing or cleaning of turbo machinery or equipment.
  - ii. Making adjustments.
  - iii. Where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.



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- .17 **Safe Work Permit Status** - a permit that verifies the status of a project such as:
- "COMPLETE"** verifies that the specific task stated on the permit has been completed by the mechanical person signing the permit.
  - "INCOMPLETE"** verifies that the specific task stated on the permit has not been completed by the mechanical person signing the permit.
- .18 **Hot Tap** is 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 gas, water, steam, and petrochemical distribution systems.
  - "Hot Tap" operations are exempt from the Lock Out/Tag Out Procedure as long as continuity of service is assured and proper Hot Tap procedures are followed.
- .19 **Tag out** is the placement of a tag out device on an energy-isolating device to indicate that the energy isolating device, and the equipment being controlled may not be operated until the tag out device is removed.
- .20 **Tag out Device** is a prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure.
- The tag out device indicates that the energy isolating device and the equipment being controlled, may not be operated until the tag out device is removed.
- .21 **Group Lockout** is a group energy isolation lockout and tagout system that may be used when the following conditions are met.
- The specified authorized employee, such as a supervisor of a group of employees, a craftsman, or other designated employee, is responsible for installing a group lock for only those individuals designated on the Energy Isolation Work Permit.
  - Each person assigned to work on the locked out/tagged out equipment must be informed as to the methods used for achieving energy isolation.

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1. Each affected, and other employee in the area, must be informed that the work is being performed.
- c. When the work is completed and/or the permit is deactivated, and prior to removing the lockout devices, the authorized employee to control the group lockout for the specific task, shall inform all personnel assigned to work on the equipment that the lockout device is going to be removed.
- d. The person responsible for starting up the equipment shall inform all affected personnel who normally work in the area of the equipment that the lockout devices are going to be removed, and shall check the equipment and area prior to starting up the equipment.
- e. When one or more crafts or crews are assigned to work on equipment covered by a group lockout system, each specific craft or crew shall have an employee designated as the authorized employee responsible for that craft or crew.
- f. Each authorized employee shall install a personal lock on the lockout device for electrical isolation sources, for the period of time the work is being performed by his/her/ her craft or crew.
- g. A primary authorized employee may be designated for multiple crafts, and shall be accountable for employees working under more than one permit.

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## A: ENERGY ISOLATION WORK PERMIT

### JAGUAR ENERGY SERVICES, LLC

Date of Permit \_\_\_\_\_

Location \_\_\_\_\_

Time of Permit \_\_\_\_\_

Equipment Process to be isolated: \_\_\_\_\_

Operator \_\_\_\_\_

Authorized Employee \_\_\_\_\_

Relieving Operator \_\_\_\_\_

Relieving Authorized Employee \_\_\_\_\_

### AFFECTED EMPLOYEES

Name	Last 4 of SS Number	Name	Last 4 of SS Number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### ISOLATION LOG: STATUS

Date Out of Service \_\_\_\_\_

Time Out of Service \_\_\_\_\_

**Type of Equipment Isolated**

**Location**

**Type of Isolating Device**

**Signature**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Back in Service \_\_\_\_\_

Time Back in Service \_\_\_\_\_

Operator Inspecting Start Up \_\_\_\_\_

Authorized Employee Reviewing Start Up \_\_\_\_\_

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## General Instructions for Lock Out / Tag Out Of Machinery and Equipment

### To Lock Out / Tag Out Equipment:

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1. **Identify** All sources of Energy and Hazards associated with the machinery and associated equipment.
2. **Notify** All affected personnel including supervisor or manager, (i.e., machine operators, etc.) of machinery shut down and Lockout.
3. **Shutdown** Turbo machinery and associated equipment following normal procedures.
4. **Isolate** Turbo machinery or equipment by following the sequential shutdown procedures.
5. **Lock Out / Tag Out** All energy sources.
  - Attach lock with personal identification.
  - Attach completed Tag out Tag
6. **Release** Any Stored or Residual Energy.
7. **Verify** Effectiveness of Lock Out / Tag Out Procedure. Check that no personnel are exposed, and test switches, machine controls, etc., to make certain the machine will not operate, and is at A Zero Energy State @. Return controls to neutral or off position after verification.

### To Restart Equipment After Lock Out / Tag Out:

---

1. **Inspect** The machine or equipment.  
Reinstall all guards.  
Clear area of tools, etc.
2. **Notify** Affected employees of restart.
3. **Remove** All Locks & Tags.
4. **Turn On** Energy sources.
5. **Test** Equipment.
6. **Notify** Affected of job completion.

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## APPENDIX B

Job:			Page:	of
Location:		Field Service Person		
Date:		Analysis Made By/Reviewed With:		
LOTO's		Training required:		
Item to be isolated:	Potential accidents of hazards:	Type of LOTO and number of same		

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