	<i>Health, Safety & Environmental</i> Electrical Safety & Control of Hazardous Energy (LOTO)			Page 1 of 7
Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0	Document Number SED-CORP-HSE-2-019

1 Purpose

Although most employees of Silver Eagle Distributors Houston, LLC (Silver Eagle Houston) have minimal exposure to electrical hazards, electrical shock and unexpected releases of hazardous energy, such as mechanical or pneumatic energy, pose a significant risk to employees performing repair or maintenance work. Silver Eagle Houston has established this Electrical Safety and Control of Hazardous Energy (LOTO) Standard to establish control measures that reduce the risk posed by these exposures.

2 Definitions

Qualified person – A person who has training in avoiding the electrical hazards of working on or near exposed-energized parts (e.g., electrician). The training shall include, at a minimum:

- The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
- The skills and techniques necessary to determine the nominal voltage of exposed live parts.
- The clearance distances specified in this standard and the corresponding voltages to which the qualified person will be exposed

Unqualified person – A person who has little or no training in avoiding the electrical hazards of working on or near exposed-energized parts.

LOTO (Lockout/Tagout) – A method of protecting workers using locks to block the flow of energy from power sources to equipment and putting tags on moving parts to warn workers of potential hazards.

Affected Employee – An employee who operates, works around, or occasionally adjusts equipment that is subject to LOTO.


Authorized Employee - An employee who maintains equipment or services equipment and is trained to use LOTO.

3 Requirements

3.1 Qualified Persons

3.1.1 Only qualified persons may work on electric circuit parts or equipment that have not been de-energized. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools. Silver Eagle Houston will only use qualified third-party providers (e.g., electricians) to perform services on energized electrical circuits or equipment.

3.1.2 Unqualified persons shall not be permitted to enter spaces that are required to be accessible to qualified persons only, unless the electric conductors and equipment involved are fully de-energized and secured via LOTO.

	<i>Health, Safety & Environmental</i> Electrical Safety & Control of Hazardous Energy (LOTO)			Page 2 of 7
	Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0

3.2 Use of Electric Power and Lighting Circuits

3.2.1 Routine Opening and Closing of Circuits

Load rated switches, circuit breakers, or other devices specifically designed as disconnecting means shall be used for the opening, reversing, or dosing of circuits under load conditions. Cable connector's not of the load-break type, fuses, terminal lugs, and cable splice connections may not be used for such purposes, except in an emergency.

3.2.2 Re-closing Circuits After Protective Device Operation

After a circuit is de-energized by a circuit protective device repetitively, the circuit may not be manually re-energized until it has been determined that the equipment and circuit can be safely energized.

3.2.3 Over Current Protection Modification

Over current protection of circuits and conductors may not be modified, even on a temporary basis, beyond that allowed in the installation safety requirements for over current protection.

3.3 Electrical Tools and Equipment – Assured Grounding

3.3.1 General Requirements

3.3.1.1 Silver Eagle Houston shall be responsible for the safe condition of electrical tools and equipment used its employees, including tools and equipment which may be furnished by employees. The assured grounding conductor requirements in this standard cover all cord sets, receptacles which are not part of the building or structure & equipment connected by cord & plug which are available for use or used by employees. A competent person will be designated to be responsible for these requirements.


3.3.1.2 Any equipment which has not met these requirements shall not be available or permitted to be used. Damaged items shall not be used until repaired.

3.3.2 Power Tool and Accessories Selection, Evaluation and Condition

3.3.2.1 The greatest hazards posed by power tools usually results from improper tool selection, misuse and or improper maintenance.

3.3.2.2 Power Tool Precautions - The following precautions will be taken by employees:

- Power tools will always be operated within their design limitations and in well-illuminated locations.
- Proper PPE shall be worn during operation.
- Tools will be stored in an appropriate dry location when not in use.
- Tools will not be carried by the cord or hose and never yank on a cord or hose to disconnect it from the receptacle.
- Cords will be kept away from heat, oils, and sharp edges or any other source that could result in damage.

	<i>Health, Safety & Environmental</i> Electrical Safety & Control of Hazardous Energy (LOTO)			Page 3 of 7
Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0	Document Number SED-CORP-HSE-2-019

- Tools will be disconnected when not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- Observers will be kept at a safe distance at all times from the work area.
- Work will be secured with clamps or a vice where possible to free both hands to operate tools.
- To prevent accidental starting, employees should be continually aware not to hold the start button while carrying a plugged-in tool.
- Tools will be maintained in a clean manner, and properly maintained in accordance with the manufacturer’s guidelines.
- Ensure that proper shoes are worn and that the work area is kept clean to maintain proper footing and good balance and proper apparel is worn. Loose clothing, ties, or jewelry can become caught in moving parts.
- Tools that are damaged will be removed from service immediately and tagged "Do Not Use".


3.3.3 Extension Cord Use

3.3.3.1 The following requirements apply to the use of extension cords:

- Employees using extension cords (drop cords) to power tools and/or equipment shall use Ground Fault Circuit Interrupters (GFCI) protection. This pertains to any part of the facility, both inside and outside.
- All extension cords must be grounding type, made with U L listed parts, and be in good physical condition.
- Extension cords may not be lengthened.
- Power outlet strips are designed for equipment that requires surge protection.
- No more than one power outlet strip may be connected to a single extension cord.
- Extension cords may not be plugged into power strips. Power strips may not be connected to each other.
- An extension cord should not be run across high traffic areas or used in applications where potential damage to the cord might occur.
- The use of an extension cord must not create a trip hazard.

3.3.3.2 Handling Extension Cords and Portable Equipment

- Portable equipment shall be handled in a manner, which will not cause damage.
- Flexible electric cords connected to equipment may not be used for raising or lowering the equipment.

	<i>Health, Safety & Environmental</i> Electrical Safety & Control of Hazardous Energy (LOTO)			Page 4 of 7
	Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0

- Flexible cords may not be fastened with staples or otherwise hung in such a fashion as could damage the outer jacket or insulation.

3.3.3.3 Visual Inspection

- Portable cord-and-plug connected equipment and flexible cord sets (extension cords) shall be visually inspected before use on any shift for external defects and for evidence of possible internal damage.
- Cord and plug-connected equipment and extension cords which remain connected once they are put in place and are not exposed to damage need not be visually inspected until they are relocated.
- Defective or damaged items shall be removed from service until repaired.

3.3.3.4 Grounding Type Equipment

- A flexible cord used with grounding-type equipment shall contain an equipment-grounding conductor.
- Attachment plugs and receptacles may not be connected or altered in a manner that would prevent proper continuity of the equipment-grounding conductor at the point where plugs are attached to receptacles. Additionally, these devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors.
- Adapters that interrupt the continuity of the equipment grounding connection may not be used.

3.3.3.5 Conductive Work Locations

Portable electric equipment and flexible cords used in highly conductive work locations (such as those inundated with water or other conductive liquids), or in job locations where employees are likely to contact water or conductive liquids, shall be approved for those locations.


3.3.3.6 Connecting Attachment Plugs

- Do not plug or unplug cords and plug-connected equipment with wet hands.
- Only handle energized plug and receptacle connections with insulating protective equipment if the condition of the connection could provide a conducting path to the employee's hand.
- Locking-type connectors shall be properly secured after connection.

3.4 Lockout/Tagout (LOTO)

3.4.1 Lockout/Tagout shall be utilized when performing service or maintenance on equipment that may store electrical or other types of hazardous energy. This includes when:


- Hazardous energy exists, or an unexpected start-up could occur, potentially harming an employee;

	Health, Safety & Environmental Electrical Safety & Control of Hazardous Energy (LOTO)			Page 5 of 7
Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0	Document Number SED-CORP-HSE-2-019

- Employees are required to remove or bypass a safety device;
- Employees are required to place any part of their body in harm's way; or
- Employees are exposed to hazardous energy.

3.4.2 All LOTO shall be performed in compliance with 29 CFR 1910.147. While any employee is exposed to contact with parts of fixed electric equipment or circuits, which have been de-energized, the circuits energizing the parts shall be locked out or tagged or both in accordance with the requirements of this paragraph in the following order.

1. Procedures shall be in place before equipment may be de-energized.
2. All affected employees will be notified that the equipment is being de-energized.
3. Circuits and equipment to be worked on shall be disconnected from all electrical energy sources.
4. Stored electrical energy, which poses a hazard to workers, shall be released.
5. Stored non-electrical energy in devices that could re-energize electric circuit parts shall be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.
6. A lock and a tag shall be placed on each disconnecting means used to de-energize circuits and equipment on which work is to be performed, except as provided below.
7. Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.
8. If a lock cannot be applied, or if the employer can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained using a lock, a tag may be used without a lock.
9. A tag used without a lock as permitted above, shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained using a lock. Examples include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.
10. A lock may be placed without a tag only under the following conditions:
 - a. Only one circuit or piece of equipment is de-energized.
 - b. The lockout period does not extend beyond the work shift.
 - c. Employees exposed to the hazards associated with re-energizing the circuit or equipment are familiar with this procedure.
11. Before any circuits or equipment can be considered and worked upon as de-energized an authorized employee shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted and does not retain any stored energy.
12. Before circuits and equipment are re-energized, even temporarily, the following requirements shall be met, in the order given:

	Health, Safety & Environmental Electrical Safety & Control of Hazardous Energy (LOTO)			Page 6 of 7
Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0	Document Number SED-CORP-HSE-2-019

- a. Affected employees and those exposed to the hazards associated with re-energizing the circuit or equipment shall be warned to stay clear of circuits and equipment.
- b. Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. However, if the employee is absent from the workplace, then the lock or tag may be removed by a qualified person designated to perform this task provided that the employer ensures that the employee who applied the lock or tag is not available at the workplace and is aware that the lock or tag has been removed before he or she resumes work at that workplace.
- c. There shall be a visual determination that all employees are clear of the circuits and equipment.

3.4.3 When Lockout/Tagout is used on the same equipment simultaneously by two or more persons, the following shall apply.

- 3.4.3.1 Each person places his/her own personal lockout or tagout device on the energy isolating device(s).
- 3.4.3.2 When an energy isolating device cannot accept multiple locks or tags, a multiple lockout or tag out device (hasp) may be used.
- 3.4.3.3 The supervisor in charge of the group lockout/tagout must not remove the group LOTO device until each employee in the group has removed his/her personal device.
- 3.4.3.4 If the work continues through a shift change, there will be a handoff meeting in which the departing and arriving authorized employees agree on how the transition will take place without exposing employees to energy hazards.

3.5 Audit

An audit must be performed every year to ensure the requirements in this standard are being performed by the employees. This standard may be updated if auditing identifies non-compliance or additional hazards.

4 Training


4.1 Unqualified Person Training

Employees who are covered by the scope this policy, but who are not qualified persons shall be trained in and be familiar with safety related work practices that pertain to their respective job assignments.

Silver Eagle Houston will provide this training as a part of its new employee orientation training. Any additional training will be based on the hazards that an employee may be exposed to.

4.2 LOTO Training

All affected employees who work in an area where LOTO procedure(s) are utilized will be instructed in the purpose and use of the energy control procedure(s), including prohibition against attempting to restart or re-energize machines or other equipment that are locked or tagged out.

	<i>Health, Safety & Environmental</i> Electrical Safety & Control of Hazardous Energy (LOTO)			Page 7 of 7
	Approved By M. Miller	Issue Date 01/01/2020	Revision Date	Revision Number 0

Authorized employees who lockout equipment and perform service and maintenance operations will be trained in recognition of applicable hazardous energy sources in the workplace, the type and magnitude of energy found in the workplace, and the means and methods of isolating and/or controlling the energy.

4.3 Training Records

The HSE Department will keep employee training records, containing the content of the training, each employee's name, and date of training. This documentation of training shall be maintained for the duration of the employee's employment.

5 References

NFPA 70E

OSHA 29 CFR 1910.147

OSHA 29 CFR 1910, Subpart S

OSHA 29 CFR 1910.137

6 Document Revision Register

Revision #	Section #	Date	Revision Description
0		01/01/2020	Initial Issue