**Control of Hazardous Energy**

**Equipment-Specific Lockout/Tagout Procedure Instructions**

*Note: Only one Procedure is required for identical equipment set up in an identical configuration.*

The template includes the following required sections:

* Signatures – Employee who completes the procedure should sign and date, then take the procedure to his/her supervisor for review and signature. If the supervisor has questions regarding any elements of the procedure, these should be taken to the next level manager and Environmental Health & Safety. The supervisor shall keep a copy of the completed form on file, and the original will be kept by the employee performing the work.
* Section A: Procedure Purpose – No additional information is required in this section.
* Section B: Equipment Description – Enter the building and room where the equipment is located. The equipment description should include enough detail to uniquely identify the specific piece of equipment covered by this procedure. If the equipment has an existing identification tag or number, this should be noted. Examples of equipment identification include, “Motor powering pump P-2”, “Air Handler located in southwest corner of the room”, etc.
* Section C: Hazardous Energy Assessment – Identify hazardous energy to which you may be exposed during your servicing work. Example:

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| **Type of Energy** | **Type / Magnitude** | **Danger Zone** | **Isolation Point(s)** |
| Electrical- low voltage (50-600 V) - list amperage | 480VAC 3 phase 100-amp service | Wiring connection points in motor housing junction box | Disconnect adjacent to motor on right hand side. |

* Section D: Preparation and Notification
	+ Step 1- Preparation: Identify group lockouts, authorized personnel, and shift changes.
	+ Step 2- Notifications: Notify and record affected employees (example: department technician who will lose compressed air when compressor is shut down).
	+ Step 3- Equipment Shutdown: List equipment shut down procedure (note: this is NOT the lockout procedure, this is just the steps to stop and shut down the machine/equipment).
* Section E: Steps for Controlling Hazardous Energy Identified in Section C. For EACH energy source / isolation point identified in Section C, complete the applicable information. Example:

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| **Energy source description:** 480 VAC 3 phase 100-amp service**Isolate:** Switch disconnect to “off”**Control:** Apply lock and tag to disconnect**Dissipation:** N/A**Verify zero energy state appropriate to the type of hazardous energy involved:** Check voltage at wiring connection point on motor |

* Section G: Steps to Return to Service

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| **Author** *Employee who completed this form(print name & sign) date*  |
| **This document has been reviewed and approved by** *Supervisor (print name & sign) date* |

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| **Section A. Procedure Purpose** |
| The purpose of this procedure is to identify all hazardous energies and hazardous energy isolation points and list all required steps to safely shut equipment down and return it to service after work is completed. Failure to follow this lockout procedure may result in injury to personnel or damage to equipment and may result in disciplinary action, up to and including termination. |

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| **Section B. Equipment Description** |
| **Equipment Location:** Building: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Room Number: \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Equipment Description:**  |

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| **Section C: Hazardous Energy Assessment** |
| Evaluate the equipment for all hazardous potential energy sources and check the left hand box if present. For each, describe the type and magnitude, danger zone (the part(s) of the equipment where the energy is found), and isolation points. Note: Describe how to control each identified hazardous energy source in Section F. |
|  | **Types of Energy** | **Type / Magnitude** | **Danger Zone**  | **Isolation Point(s)** |
| **[ ]**  | **Electrical** - low voltage (<50 V) - list amperage |  |  |  |
| [ ]  | **Electrical**- low voltage (50-600 V) - list amperage |  |  |  |
| [ ]  | **Electrical** - high voltage (>600 V) - list amperage |  |  |  |
| [ ]  | **Pressure** - hydraulic, pneumatic > 150 psi in rigid pipe50 psi in flexible, unsecured lines |  |  |  |
| [ ]  | **Vacuum** |  |  |  |
| [ ]  | **Mechanical** - capable of crushing, pinching, cutting, snagging, striking |  |  |  |
| [ ]  | **Thermal**- high temperature-surface temperature, hot liquids, steamLiquids or gases > 125°F (52°C)Surfaces ≥ 140° F (60°C) |  |  |  |
| [ ]  | **Thermal, cryogenic** - super cold surface or cryogenic liquid < 27°F (-3°C) |  |  |  |
| **[ ]**  | **Stored energy** - flywheel, springs, differences in elevation, capacitors, batteries, etc. |  |  |  |
| [ ]  | **Emergency power**- does the equipment maintain an emergency power/uninterruptible power supply? |  |  |  |

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| **Section D: Preparation and Notification** |
| 1. **Is this a Group Lockout?** **[ ]  Yes** **[ ]  No**

 **If “yes” list all authorized employees working under this lockout:****Primary Authorized Employee: ­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****Other Authorized Employees: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****Will this lockout span a shift change?** **[ ]  Yes** **[ ] No****If “yes” then supervisor or manager must sign this section confirming that the following shift has been notified of the presence of the lockout and the need to place their locking devices at the energy control point before working on the locked-out equipment:****Name of Supervisor/Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****Signature of Supervisor/Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 1. **Notify**

**Prior to starting work, notify affected workers of the lock out activity.****Employees notified: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| 1. **Shut equipment down steps:**
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| Section E. Steps for Controlling Hazardous Energy Identified in Section C |
| **Energy source description:****Isolate:** **Control:** **Dissipation:** **Verify zero energy state appropriate to the type of hazardous energy involved:**  |
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| **Energy source description:****Isolate:** **Control:** **Dissipation:** **Verify zero energy state appropriate to the type of hazardous energy involved:**  |

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| **Section G: Steps to Return to Service** |
| 1. Verify equipment and area is clear of tools, workers, equipment, materials, and debris.
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| 1. Unlock and remove any blocking devices; remove linkages.
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| 1. Reposition any safety devices, guards, interlocks.
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| 1. Warn workers to stay clear of area.
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| 1. Remove all locks and tags for energy control points.
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| 1. Verify affected areas are clear of personnel.
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| 1. Re-energize the equipment. Note: be certain to consider effects of re-energization on all systems “downstream” of energy source.
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| 1. Notify supervisor when work is complete.
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| 1. If you find any errors in this procedure, or have suggestions on how to improve it, provide your comments to your supervisor.
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