Lockout/Tagout/Tryout Equipment Procedure - EXAMPLE

Machine: Air Handler #1
Location: Scaife Hall – Basement – Room B-1 (Mechanical Room)

ENERGY SOURCES:

<table>
<thead>
<tr>
<th>Energy Type(s)</th>
<th>Energy Isolation Device(s)</th>
<th>Magnitude(s)</th>
<th>Location &amp; Description of Energy Isolation Device(s)</th>
<th>Lockout Device(s)</th>
</tr>
</thead>
</table>
| Electrical     | Electrical Disconnect (Supply & Return Fan) | 480 V        | **Electrical Disconnect (Supply): Located on the Unit, left side**
|                |                              |              | **Electrical Disconnect (Return) – Located to the right of the return fan cabinet** | Lock/Tag          |
| Water          | Two (2) Water Valves         | 70-110 PSI   | **Water Valve #1: Located above the Air Handler facing the aisleways**
|                |                              |              | **Water Valve #2: Located on return pipe facing the ceiling (roughly 8ft up)** | Lock/Tag          |
| Steam          | One (1) Steam Valve          | 55-100 PSI   | **Steam Valve: Located on “Low Pressure Steam” pipe (roughly 2 feet from Water Valve #1)** | Lock/Tag          |

![Diagram of Air Handler #1](image1.png)
![Diagram of Air Handler #1 Disconnect](image2.png)
![Diagram of Air Handler Return Fan](image3.png)

![Diagram of Return Fan Disconnect](image4.png)
![Diagram of Supply Water Valve](image5.png)
![Diagram of Return Water Valve](image6.png)
![Diagram of Steam Valve](image7.png)
AUTHORIZED EMPLOYEES

Refer to the attached document that displays pictures of each isolation point as well as the machine itself.

SHUTDOWN PROCEDURES & SEQUENCE OF LOCKOUT:

The steps listed below must be followed to properly shut down and de-energize this equipment.

1. Notify all affected employees verbally that servicing or maintenance is required on this machine and that the machine must be shut down and locked out to perform the servicing or maintenance.
   a. Affected employees include the machine operator and any employees in the area
2. If the machine is operating, please follow the normal stopping procedure to shut it down.
   a. Go to both the supply and return fan disconnects and place the switches into the OFF position.
      Apply lock/tag to both disconnect switches.
   b. Once the electrical energy has been isolated, go over to the Supply/Return Chilled Water valves and shut them off. Apply lock/tag to both water valves.
   c. Shut off and lock out the Steam Valve.
   d. There is no specific way to test lockout. Double check that all three (3) valves are shut off and locked out and both the Supply Fan & Return Fan disconnects is shut off and locked out.
3. Authorized personnel will have equipment assigned to them and will be kept with them at all times. If an extended lockout is needed, there is a lockout station at the shop. This will be the location to acquire the equipment and make sure it is signed out properly.
4. Each authorized person that will be servicing the equipment needs to apply their individual locks and tags to the lockout device(s).
5. All stored or residual energy must be dissipated or restrained
   a. Ensure the water lines are bled if needed.
   b. Allow the fans to come to a complete stop.
   c. Apply a lock/block to the fan blades as needed
6. Verify that all energy has been dissipated by first checking that no personnel are exposed, then attempt to restart the machine. Return the operating controls to the “neutral” or “off” position after verifying the isolation of the machine.
7. The machine or equipment has now been locked out.

RESTORING EQUIPMENT TO SERVICE:

The steps listed below must be followed to properly release this equipment from a locked or tagged out condition and restart it.

1. Inspect the machine and the immediate area around the machine to ensure that nonessential items have been removed and that the machine components and guards are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in neutral.
4. Remove the lockout devices and reenergize the machine.
5. Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.