# **Environmental Health and Safety Office Research Administration**

1762 Clifton Road NE, Suite 1200 Atlanta, GA 30322 (404) 727-5922 FAX: (404) 727-9778

## LOCKOUT TAGOUT PROCEDURE

#### **PURPOSE**

To develop lockout tagout procedures to ensure that the machine, process or system is isolated from all potentially hazardous energy sources, where the unexpected energization or release of stored energy could cause injury.

## **COMPLIANCE**

**DEPARTMENT / SHOP** 

**EQUIPMENT / SYSTEM NAME** 

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. Authorized employees are required to perform equipment isolation in accordance with this procedure. Disciplinary action will be taken against all violators according to their company's disciplinary policy.

**GENERAL INFORMATION** 

ORIGIN DATE

ASSET NO. / SERIAL NO.

REASON FOR EQUIPMENT (BUILDING, ROOM, ETC.)  REASON FOR EQUIPMENT ISOLATION    INITIAL PROCEDURE									
INITIAL PROCEDURE	LOCATION OF	EQUIPMENT (BUILD	ING, ROOM, ETC.)						
AUTHORIZED PERSONNEL  HAZARD ASSESSMENT  Electrical Thermal (cryogenic) Chemical Radiation, ionizing Pressure (hydraulic, pneumatic) Radiation, non-ionizing Mechanical Stored energy Thermal (heat) Other:  LOCKOUT TAGOUT SEQUENCE Step 1 - NOTIFY AFFECTED EMPLOYEES THAT SERVICING WILL TAKE PLACE UNDER LOCKOUT TAGOUT. Step 2 - SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES. Step 3 - FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE MAGNITUDE METHOD OF ISOLATING / DISSIPATING (i.e. disconnects, drains, vents, etc.)  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)	REASON FOR I	EQUIPMENT ISOLAT	ION						
HAZARD ASSESSMENT    Chemical	INITIAL P	ROCEDURE		REVISION TO PROCE	REVISION TO PROCEDURE				
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE		AUTHORIZED PER	SONNEL	AFFECTE	AFFECTED PERSONNEL				
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE									
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE									
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE									
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE									
Electrical Thermal (cryogenic)  Chemical Radiation, ionizing  Pressure (hydraulic, pneumatic) Radiation, non-ionizing  Mechanical Stored energy  Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE	HAZADD ACCECCMENT								
Chemical Radiation, ionizing Pressure (hydraulic, pneumatic) Radiation, non-ionizing Mechanical Stored energy Thermal (heat) Other:    LOCKOUT TAGOUT SEQUENCE									
Pressure (hydraulic, pneumatic)  Mechanical  Dother:    Cockout Tagout Sequence				`````					
Mechanical  Thermal (heat)  COCKOUT TAGOUT SEQUENCE  Step 1 – NOTIFY AFFECTED EMPLOYEES THAT SERVICING WILL TAKE PLACE UNDER LOCKOUT TAGOUT.  Step 2 – SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES.  Step 3 – FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. disconnects, drains, vents, etc.)  CHECK (i.e verify zero energy state)									
Thermal (heat)    Other:			ieumalic)						
LOCKOUT TAGOUT SEQUENCE  Step 1 - NOTIFY AFFECTED EMPLOYEES THAT SERVICING WILL TAKE PLACE UNDER LOCKOUT TAGOUT.  Step 2 - SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES.  Step 3 - FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)  (i.e. disconnects, drains, vents, etc.)									
Step 1 - NOTIFY AFFECTED EMPLOYEES THAT SERVICING WILL TAKE PLACE UNDER LOCKOUT TAGOUT.  Step 2 - SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES.  Step 3 - FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)  (i.e. disconnects, drains, vents, etc.)	U Thermal (near) Utiler.								
Step 1 - NOTIFY AFFECTED EMPLOYEES THAT SERVICING WILL TAKE PLACE UNDER LOCKOUT TAGOUT.  Step 2 - SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES.  Step 3 - FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)  (i.e. disconnects, drains, vents, etc.)			LOCKOUT	TAGOUT SEQUENCE					
Step 2 – SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR SHUTDOWN PROCEDURES.  Step 3 – FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)  CHECK (i.e. verify zero energy state)									
Step 3 – FOLLOW THE STEPS BELOW TO PROPERLY ISOLATE EACH ENERGY SOURCE, APPLY LOCKOUT TAGOUT, DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e. verify zero energy state)  CHECK (i.e. verify zero energy state)	Step 2 - SHUT DOWN (I.E. TURN OFF) THE EQUIPMENT OR SYSTEM FOLLOWING THE NORMAL STOPPING OR								
DISSIPATE ANY STORED ENERGY SOURCES AND VERIFY THAT THE EQUIPMENT IS IN A ZERO ENERGY STATE:  HAZARD SOURCE  MAGNITUDE  METHOD OF ISOLATING / DISSIPATING (i.e verify zero energy state)  CHECK (i.e verify zero energy state)									
HAZARD SOURCE MAGNITUDE METHOD OF ISOLATING / DISSIPATING (i.e. disconnects, drains, vents, etc.)  CHECK (i.e verify zero energy state)									
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18	HAZARD		METHOD OF ISOLATING / DISSIPATING		CHECK (i.e verify zero energy				
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18									
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18									
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18									
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18									
LOTO Procedure Development Form 1 Revision Date: 15-Mar-18									
	LOTO Pro	acadura Davalanmant	Form 1 Povision	Doto: 15 Mar 19	nago 1 of 2				

# LOCKOUT TAGOUT PROCEDURE

HAZARD SOURCE	MAGNITUDE	METHOD OF ISOLA (i.e. disconnects, o		CHECK (i.e verify zero energy state)			
ADDENDUM - PROCEDURE STEPS CONTINUED ON SEPARATE PAGE.							
Step 4 – REVIEW HAZARD ASSESSMENT AND LOCKOUT SEQUENCE TO ENSURE ALL HAZARDOUS ENERGY HAS BEEN ISOLATED AND THAT ALL STORED ENERGY HAS BEEN DISSIPATED.							
STEP 5 – ATTEMPT TO RESTART EQUIPMENT; VERIFY THAT EQUIPMENT WILL NOT START. CAUTION: RETURN  OPERATING CONTROL(S) TO NEUTRAL OR "OFF" POSITION AFTER VERIFYING THE ISOLATION OF THE EQUIPMENT.							
RETURN EQUIPMENT TO SERVICE							
<b>Step 1</b> – Check the equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.							
Step 2 – Check the work area to ensure that all employees have been safely positioned or removed from the area.							
Step 3 – Verify that the controls are in neutral or "off" position.							
Step 4 - Remove the lockout devices and reenergize the machine or equipment.							
<b>Step 5</b> – Notify the affected employees that the servicing or maintenance is completed, and the machine or equipment is ready for use.							
DOCUMENT REVIEW AND APPROVAL							
Instructions:							
<ul> <li>Return completed forms to the department supervisor for review and approval.</li> <li>Submit a copy of the department approved LOTO procedure to the Environmental Health and Safety Office (EHSO) at <a href="mailto:indhyg@emory.edu">indhyg@emory.edu</a> for a compliance review and input into the final LOTO lockout procedure format.</li> </ul>							
AUTHORIZED E PROCEDURE	MPLOYEE COMPLE	TING FORM /	DATE COMPLETED				
SUPERVISOR F	REVIEWING PROCEI	DURE	DATE COMPLETED				

Revision Date: 15-Mar-18