Hazardous Energy Assessment Form

Equipment Description:

Completed by: **Date:**

Evaluate the equipment for all existing and potential hazardous energy sources and indicated present by checking the left hand column. For each, describe the energy type and magnitude, danger zone (the part(s) of the equipment where the energy is found), and the isolation point(s)/method of control.

Check If Present	Types of Energy	Type / Magnitude	Danger Zone	Isolation Point(s) and Control Method
	Electrical - low voltage (<50 V) - list amperage			
	Electrical- low voltage (50-600 V) - list amperage			
	Electrical - high voltage (>600 V) - list amperage			
	Chemical - flammable, pressure, extreme heat, fire, corrosive, reactive, oxidizer, toxic, etc. **Required: Consult an ES&H subject matter expert.**			
	Pressure - hydraulic, pneumatic > 150 psi in rigid pipe > 50 psi in flexible, unsecured lines			
	Vacuum			
	Mechanical - capable of crushing, pinching, cutting, snagging, striking			
	Thermal- high temperature-surface temperature, ,hot liquids, steam Liquids or gases > 125°F (52°C) Surfaces ≥ 140° F (60°C)			
	Thermal, cryogenic - super cold surface or cryogenic liquid < 27°F (-3°C)			
	Radiation, ionizing			
	Radiation, non-ionizing – ultra-violet, infra-red, RF/Microwave, laser, magnetic			
	Stored energy - flywheel, springs, differences in elevation, capacitors, batteries, etc.			
	Emergency power- does the equipment maintain an emergency power /uninterruptible power supply?			
	Other- describe			

Hazardous Energy Thresholds

Energy Form	**Evaluate Hazard and Consider Lockout/Tagout**	**Lockout/Tagout Required (see note 1)**
Electrical (AC or DC)	< 50V and < 5mA, and ≤ 10J	≥ 50V, or > 5 mA or > 10J
Thermal (hot)	Liquids or gases ≤ 125°F (52°C) Surfaces ≤ 140° F (60°C)	Liquids or gases > 125°F Surfaces ≥ 140° F
Thermal (cold)	Liquids and surfaces ≥ 27°F (-3ºC)	Liquids and surfaces < 27°F
Mechanical - kinetic	No threshold; each situation must be evaluated	
Mechanical - potential	No threshold; each situation must be evaluated	
Pneumatic	≤ 150 psi in rigid pipe ≤ 50 psi in flexible, unsecured lines	> 150 psi in rigid pipe (see note 2) > 50 psi in flexible, unsecured lines
Hydraulic	≤ 150 psi in rigid pipe ≤ 50 psi in flexible, unsecured lines	> 150 psi in rigid pipe (see note 2) > 50 psi in flexible, unsecured lines
Chemical	No threshold; each situation must be evaluated based on the chemical's hazardous properties	

1 Unless de-energizing the source by lockout/tagout introduces additional or increased hazards or is infeasible due to equipment design or operational limitations.

2 Double valve isolation is required when the operating temperature exceeds 200°F or the operating pressure exceeds 500 psig.