Control of Hazardous Energy (Lockout/Tagout) – Appendix A: Definitions

1910.147, *The Control of Hazardous Energy* – Oregon OSHA regulation on lockout/tagout.

Affected employee – An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized employee – A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

Capable of being locked out – An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Chemical - Liquids, such as gasoline, diesel, benzene, acids, and caustics. Gases, such as propane, natural gas, and methane. Solids, such as fertilizer, wet and dry cell batteries, and combustible dust.

Disconnecting Means – A device, group of devices, or other means by which the conductor of a circuit can be disconnected from its source of supply.

Electrical - Alternating (AC) and direct (DC) currents. Includes equipment and conductors at both household and industrial-voltages, photovoltaic systems, circuit breakers, transformers, capacitors, inverters, motors, and hybrid vehicles.

Energy-Control Program – The written plan that describe how workers will secure energy-isolating devices, use and remove Locks and Tags, and test energy-isolating devices.

Energized – Connected to an energy source or containing residual or stored energy.

Energy-isolating device – A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and in addition no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

Energy source – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Gravitational - Objects such a hoisted vehicles, raised dumpster lids, objects supported by a crane, and elevated dump truck beds.

Hazardous Energy – Any energy that could cause injury to employees.

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Hazardous Equipment Evaluation – A department Manager/supervisor activity performed before a LO/TO activity that is used to determine whether machinery or equipment meets criteria for inclusion in PCC's Control of Hazardous Energy (Lockout/Tagout) Plan. This Evaluation is documented on Form 1 – *Equipment Evaluation and Energy Control Procedure.*

Hot tap – A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Hydraulic - Pressurized hydraulic systems, including hoses, pumps, valves, actuators, and reservoirs such as those on a forklift, in an automotive vehicle hoist, power press equipment, or an injection molding machine.

Infeasible – An act not possible to do easily or conveniently; impracticable.

Isolate or Isolation – The elimination or removal of a physical or atmospheric hazard by preventing its release. Isolation includes, but is not limited to, the following methods:

- Blanking or blinding,
- Misaligning or removing sections of lines, pipes, or ducts,
- A double block-and-bleed system,
- Blocking or disconnecting all mechanical linkages,
- Lockout or tagout of all sources of energy.

Kinetic - Energy resulting from moving objects, such as released loads, uncoiling springs, and moving machinery. When these objects are released, their potential energy is converted to kinetic energy.

LO aka Lockout – The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device – A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

LO/TO – Lockout/Tagout.

Mechanical - Sources such as a breeze rotating a wind turbine, water moving a paddle wheel, vehicle/mobile equipment movement, and a spring under compression. Extreme sound is also a hazardous mechanical energy.

Normal production operations - The utilization of a machine or equipment to perform its intended production function.

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Periodic Inspection – The periodic inspection is an annual evaluation of the energy-control procedures for equipment that is locked out or tagged out by Authorized Employees that is completed by a Supervisor or designated Authorized Employee who understands the energy-control procedures for the equipment.

Plan (aka The plan) – PCC's Health & Safety Manual Chapter 10 – *Control of Hazardous Energy (Lockout/Tagout)*

Pneumatic - Pressurized air or gas systems, including pipes, pumps, valves, actuators, and pressure vessels such as those found in coating or pesticide sprayers, air compressors, and tank and pipe purging systems.

Potential - *Stored* energy that can be drawn upon to do work. *Potential* energy can be viewed as motion waiting to happen based on an object's position, such as the energy found in elevated, suspended, compressed, or coiled materials. Potential energy can be converted to kinetic energy to do work.

Radiation - Visible light, infrared, microwave, ultraviolet, and X-rays. Non-ionizing radiation includes lasers, radio frequency (RF), and microwave (MW). Ionizing radiation includes computed tomography (CT) and X-rays.

Servicing and/or maintenance – Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Setting up – Any work performed to prepare a machine or equipment to perform its normal production operation.

Stored Energy – (also residual or potential energy) is energy that resides or remains in the power supply system.

TO aka Tagout – The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device – A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Thermal - Hot water, heated oil, steam, and equipment need time to cool, while liquefied gases, such as nitrogen, need time to warm to safe thermal levels.