Lockout/Tag Out/Tryout Policy

1.0 Purpose

The purpose this policy is to ensure uniformity throughout GSI MPI's operations for precautions necessary to protect personnel from hazards due to the unexpected release of energy or start-up of equipment or machinery.

2.0 Scope

This policy applies to all GSI MPI employees and GSI MPI Subcontractors where the unintended start-up of equipment, operation of controls, or release or energy could result in damage to equipment or injury to personnel.

3.0 Definitions*

- Affected employee – An employee whose job is affected by lockout/tag out procedures.

- Authorized employee – A person who locks out or tags out machines or equipment in order to perform servicing or maintenance.

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

- Energy isolating device – Any mechanical device that physically prevents the transmission or release of energy (disconnect switches, line valves and blocks, manually operated circuit breakers, etc.)

- 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 (key type) to hold a energy isolating device in the safe position and prevent the energizing of a machine or equipment.

- Tag out – The placement of a tag out device on an energy isolating device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag out device is removed.

- Tag out device – Any prominent warning device, such as a tag and a means of attachment that can be securely fastened to an energy-isolating device in accordance with the energy control procedure.

- *Tag out* – After locking and tagging of a piece of equipment you shall attempt to start the equipment to ensure that it is positively locked out.

- Tryout – Ensure that the equipment is disconnected from the energy source by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating controls or by testing to make certain the equipment will not operate.

4.0 **Lockout/tag out procedures**

4.1 Preparation for a lockout/tag out

A) Prior to lockout/tag out, affected and authorized personnel shall receive training in accordance with Section 5.0 Training of this policy.

B) All energy isolating devices must be located prior to performing a lockout/tag out. The Energy Source Evaluation and Control Form (attachment A) must be completed to document the location of energy isolating devices and lockout/tag out procedures.

C) Before an authorized employee turns off a piece of equipment, the authorized employee must have knowledge of the type and magnitude of the energy to be controlled and the methods or means to control the energy source.

D) Before lockout/tag out controls are applied, all affected employees will be notified and given the reasons for the lockout/tag out.

4.2 Lockout/tag out device application

A) If a machine or equipment is operating, it will be shut down by normal stopping procedures by either the affected or authorized employee. All potentially hazardous stored or residual energy sources (i.e. batteries, capacitors, springs, hydraulic systems, etc) will be relieved, disconnected, restrained or otherwise rendered safe.

B) Locks or tags shall be affixed to each energy isolating device only by the "authorized" employee.

C) Locks and tags will be singularly identified and will not be used for any other purpose Locks and tags will be in a position that will be immediately obvious to anyone attempting to operate the device.

D) Locks shall be affixed in manner that will hold the energy isolating device in a "safe" or "off" position. Locks will be durable and capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.

E) Tags shall be non-reusable, attached by hand, self locking and non-releasable with a minimum unlocking strength of no less than 50 pounds.

F) Protective materials and hardware shall be provided of isolating, securing or blocking of machines or equipment from energy sources. These protective materials and hardware include, but are not limited to, locks, tag chains, wedges, key blocks, adapter pins and self locking fasteners.

G) Locks and tags will indicate the identity of the authorized employee applying the device.

H) A tag may be used without a lock if it can be demonstrated that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock. This demonstration must be documented.

4.3 Verification of isolation

A) Prior to starting work on the machine or equipment that has been locked out and after ensuring that no personnel are exposed to the release of hazardous energy, the authorized employee will operate the normal operating controls to verify that the machine or equipment has been DE energized and that it will not operate.

B) After verifying isolation, the operating controls must be returned to the "neutral" or "off" position.

4.4 Release from lockout/tag out

A) Before the lockout/tag out devices are removed and energy is restored to the machine or equipment, the following procedures will be implemented:

1) The work area will be inspected to ensure that nonessential items have been removed and to ensure that the machine or equipment components are operationally intact.

2) The work area will be checked to ensure that all employees have been safely positioned or removed.

B) Only the authorized employee who applied the lockout/tag out device is permitted to remove the lockout/tag out device.

C) If the authorized employee who applied the lockout/tag out device is not available to remove it, the device may removed by a competent person adhering to the following procedures:

1) Verification by the competent person that the authorized employee who applied the lockout/tag out device is not within the facility.

2) All reasonable efforts will be made to contact the authorized employee to inform the authorized employee that their lockout/tag out device has been removed.

3) The authorized employee must be informed the device was removed before resuming work.

4.5 Multi employee lockout/tag out

A) If more than one individual is required to lockout/tag out equipment, each shall place their own lock or tag on the energy isolating device.

B) When an energy isolating device cannot accept multiple locks or tags, a multiple lockout/tag out device (i.e. hasp) shall be used.

4.6 Shift changes

A) If a lockout/tag out procedure must remain in effect during a shift change, the following procedures will be followed:

1) The oncoming supervisor and authorized employees will review and sign the Energy Source Evaluation and Control Form. The authorized employees will also confirm lockout/tag out controls is still in effect.

2) All affected personnel on arriving for the shift will be briefed on the lockout/tag out during a toolbox meeting.

B) Authorized employees on arriving for the shift are to place their own lockout/tag out devices on the energy control devices.

5.0 Training

A) All authorized personnel must be trained prior to performing a logout/tag out. Training will cover procedures outlined in this SOP.

B) All affected personnel in the vicinity of equipment locked or tagged out shall be trained or their roles, restrictions and limitations in accordance with this SOP.

C) Personnel shall be retrained under the following conditions:

1) There is a change in their job assignments,

2) Changes in machines, equipment or processes present new hazards.

3) There is a change in the energy control procedures.

4) Periodic inspections reveal inadequacies in employee knowledge of lockout/tag out procedures and/or employees are deviating from lockout/tag out procedures

D) Training shall be conducted by the site supervisor and documented on the training log found in attachment B.

6.0 **Responsibilities**

6.1 Site Supervision

Site Supervision (Project Managers/Superintendents) is responsible for enforcement and implementation of this policy.

Attachment A Energy Source Evaluation and Control Form
Attachment B Training Log
*Information referenced from 29 CFR 1910.147

Attachment A

Attachment B