IEA, INC.

NORTHFIELD PUBLIC SCHOOLS

Management Plan for Lockout/Tagout

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IEA Project # 201710490

Contact Us:

BROOKLYN PARK OFFICE
9201 W. BROADWAY, #600
BROOKLYN PARK, MN 55445
763-315-7900

MANKATO OFFICE
610 N. RIVERFRONT DRIVE
MANKATO, MN 56001
507-345-8818

ROCHESTER OFFICE
210 WOOD LAKE DRIVE SE
ROCHESTER, MN 55904
507-281-6664

BRAINERD OFFICE
601 HWY NW 5TH ST. SUITE #4
BRAINERD, MN 56401
218-454-0703

MARSHALL OFFICE
1420 EAST COLLEGE DRIVE
MARSHALL, MN 56258
507-476-3599

VIRGINIA OFFICE
5525 EMERALD AVENUE
MOUNTAIN IRON, MN 55768
218-410-9521

www.ieasafety.com

info@ieasafety.com

800-233-9513

Northfield Public Schools

Management Plan for Lockout/Tagout

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Contact Person: Jim Kulseth

Phone Number: 507.645.3435

Email Address: jkulseth@northfieldschools.org

Northfield Public Schools* Annual Review Form *Management Plan for Lockout/Tagout

Certification

I certify that I have reviewed the information provided and accept this written management plan. With assistance from our EHS consultant, the district will implement the policies and procedures noted within this plan. The written plan is a working document that will be reviewed and revised annually, or as needed.

Jim Kulseth _____ _____ _____

Print Name Signature Date

Program reviews and follow-up of program-related issues are documented below.

Date	Actions/Comments	Reviewed by:
01/2018	Reviewed and updated plan	Cassie Bowser, IEA

1.0 Purpose and Authority

Northfield Public Schools is dedicated to providing safe work places for employees and students. This program is intended to protect employees from the unexpected energization or activation of equipment during service and maintenance activities, and to comply with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.147 Control of Hazardous Energy (Lockout/Tagout). This program also describes the training that is necessary to inform employees on the details of the program, how it is implemented, and the significance of non-compliance.

2.0 Scope

Servicing and/or maintenance that takes place during normal operations is covered by this plan if an employee is required to remove or bypass a guard or safety device, and/or if an employee is required to place a body part into the point of operation or where an associated danger exists during machine operation.

Minor tool changes and adjustments and other minor servicing activities that are routine and repetitive are not covered by this plan.

3.0 Responsibility for Compliance

The Director of Building and Grounds, or designated alternative, shall:

- Develop and implement specific energy control policy for each machine identified in this program.
- Define and procure authorized lockout and tagout devices.
- Train employees on the lockout/tagout program and procedures.
- Maintain all training and work files regarding this program.
- Only purchase new equipment or machinery that can accommodate locks; if new equipment or machinery cannot accommodate locks, new lockout/tagout equipment is purchased.
- Identify specific hazards and develop a hazard isolation procedure for each individual machine or equipment.
- Communicate and practice the facility's hazardous energy control policy and procedures with employees in the work unit.
- Conduct periodic inspections to monitor the effectiveness of hazard isolation procedures.

Authorized employees for Northfield Public Schools shall:

- Adhere to the requirements of this lockout/tagout plan.
- Secure their own locking devices.
- Complete safety training requirements and periodic inspections.
- Report workplace injuries or near misses to their supervisor.

Affected employees for Northfield Public Schools shall:

- Notify appropriate people when equipment needs servicing.
- Follow lockout/tagout instructions given by authorized employees.
- Not remove lockout devices unless authorized to do so.
- Not attempt to start or energize equipment while in lockout stage.

4.0 Energy Control Procedures

Specific energy control procedures have been developed and are in the Director of Buildings and Grounds Office as well as in the individual buildings. These procedures clearly and specifically outline the purpose, rules, and techniques to be utilized when maintenance or servicing activities occur. Machines and equipment require an energy control procedure that includes the following:

- A specific statement of the intended use of the procedures.
- Specific procedural steps for shutting down, isolating, blocking, and securing machines or equipment relative to the control of hazardous energy.

- Specific procedural steps for the placement, removal, or transfer of all LOTO devices and the responsibility of them.
- Specific requirements for testing a machine or equipment to determine and verify the effectiveness of the LOTO devices, and other energy control measures relative to the control of the hazardous energy for each piece of equipment/machine.

5.0 Sequence of Lockout

Only authorized employees responsible for servicing or maintenance perform lockout/tagout. The following sequence of lockout is followed:

1. *Preparation for shutdown.* Before an authorized or affected employee turns off a machine or equipment, the authorized employee has the knowledge of the type of magnitude of energy, the hazards of the energy to be controlled, and the method or means of controlling all hazardous energy sources. Affected employees are notified of the intended shut down and lockout.
2. *Machine or equipment shutdown*. The machine or equipment is shut down or turned to the off position using the procedures established for the machine or the equipment. An orderly shutdown must be utilized to avoid causing additional hazards that may develop as a result of equipment shut down.
3. *Machine or equipment isolation*. All energy-isolating devices that are needed to control the escape of hazardous energy to the machine or equipment are physically located and operated in such a manner as to isolate the machine or equipment from release of energy source(s).
4. *Lockout or tagout application*. Lockout or tagout device(s) are affixed to each energy-isolating device by an authorized employee. When used, lockout devices are holding the energy-isolating device in the "off" or "safe" position.
5. *Stored energy*. Following the application of lockout or tagout devices to energy isolating devices, potentially hazardous stored or residual energy is relieved, disconnected, restrained, and otherwise rendered safe. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation is continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.
6. *Verification of isolation*. Prior to start of work on equipment that has been locked out or tagged out, the authorized employee verifies that isolation and de-energization of the machine or equipment have been accomplished.

   NOTE: If a switch or disconnect cannot be locked out for any reason, an electrician must remove the fuse(s) before work is started. If the fuse cannot be removed, tagout regulations may apply.

7. When the machine is fully locked out, service and repairs can safely begin.
8. If there are any doubts about the above procedures, the authorized employee contacts their supervisor before proceeding.

No employee removes a LOTO device affixed by another employee unless they have been authorized to do so. The person who affixed the original LOTO device is responsible for removal except in extenuating circumstances (e.g., employee leaves suddenly due to illness or injury). If a person other than the original employee must remove a LOTO device, the Lock Removal Form will be completed (see appendices).

If equipment will be down for an extended period of time, but is not being worked on (e.g., while waiting on parts), a sign will be posted on equipment stating, "out of service," an expected "return to service" date, and the name of the responsible employee. No maintenance or work will be done on the equipment until the full energy control procedures have been followed.

6.0 Group Lockout/Tagout

When more than one crew or department is involved in a maintenance or service of equipment, assignment of overall responsibility is given to an authorized employee designated to coordinate affected work forces and document continuity of protection. Each authorized employee will affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he

or she begins work, and will remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

7.0 Testing or Positioning Equipment

In situations where lockout/tagout devices must be temporarily removed from the energy-isolating device and the machine or equipment must be energized to test or position the machine, equipment, or component, the following actions are followed:

- Clear the machine or equipment of tools and materials.
- Remove employees from the machine or equipment area.
- Remove the lockout/tagout devices.
- Energize and proceed with testing or positioning.
- De-energize all systems and reapply energy control measures to continue with servicing and maintenance.
- Release stored energy (capacitors, springs, elevated members, rotating flywheels, or hydraulic/air/gas/steam systems).

8.0 Restoring Equipment to Service

When work is completed and the machine or equipment is ready for testing or normal service, check equipment and/or circuits to document that no one is exposed. Notify affected employees of lockout removal and equipment restart. When the equipment and/or circuits are clear, remove all locks. The energy isolating devices may be operated to restore energy to the equipment and/or circuits. The equipment is restarted.

9.0 Equipment for Lockout/Tagout

Within the district, there are several types of machinery and equipment in use. For achieving lockout/tagout of this machinery, employees are provided with appropriate lockout/tagout devices.

- *Lockout devices* – are substantial enough to prevent removal without the use of excessive force or unusual techniques, such as bolt cutters or other metal cutting tools.
- *Tagout devices* – including their means of attachment, are substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means are of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds, and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie. Warning tags bear the name of the authorized person and the date of application. Tags are made to be durable, weather proof, and not easily damaged.
- *Padlocks* – One or more padlocks will be issued to all authorized employees. Each padlock will have an individual key associated with it. Key(s) are issued with each lock and these locks may be used for lockout purposes only. Locks are identified and assigned to each employee. Only the authorized person may apply and remove his own lock. Key(s) may <u>never</u> be given to another person.

  Note: Under certain circumstances a second, or master, key will be issued to a designated supervisor to enable them to open and remove the padlock.

- *Lockout Clamps*—These devices are designed to accommodate more than one lockout padlock when one or more individuals are working on de-activated equipment. Each person, to facilitate his or her safety, applies a lock and warning tag and removes it when the task has been completed.

- *Warning Tags* – Authorized employees are issued warning tags, which must be affixed and used whenever a padlock cannot be applied. The tag must be attached as closely as possible to the energy disconnect source. Extra caution will be exercised under these conditions since there is no physical restraint when only a tag is used and energy can be restored without the removal of a lock. Electricians may remove fuses, but must attach a tag to the panel involved, and remove the tag when the machine is ready for service and the fuse is replaced.

Tag legends may include but are not limited to the following:

DANGER Do Not Start	**DANGER** Do Not Energize
DANGER Do Not Open	**DANGER** Do Not Operate
DANGER Do Not Close	**DANGER** Hands Off

10.0 Training

Northfield Public Schools provides training to document that the purpose and function of the energy control program is understood by employees, and the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by authorized and affected employees**.** Training documentation is updated and kept on file in the District Office.

Authorized employees receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control. At a minimum, training is conducted at the time of initial hire.

Affected employees who are required to operate equipment under lockout/tagout, or whose job requires them to work in an area in which such servicing or maintenance is performed, are trained at the time of initial hire. The training consists of recognition that only trained and authorized employees are repairing, replacing, or adjusting machinery and equipment; the understanding that affected employees may not remove locks, locking devices, or tags from machinery, equipment, or circuits; and the purpose and use of lockout procedures.

When tagout systems are used, employees are also trained in the following limitations of tags:

- Tags are essentially warning devices affixed to energy-isolating devices and do not provide the physical restraint on those devices that is provided by a lock.
- When a tag is attached to an energy-isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
- Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are, or may be, in the area in order to be effective.
- Tags and their means of attachment must be made of materials that will withstand the environmental conditions encountered in the workplace.
- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Employee Retraining

Retraining is provided for authorized and affected employees whenever there is a change in job assignments, a change in machines, equipment, or processes that present a new hazard, or when there is a change in the energy control procedures. Additional retraining is also conducted whenever periodic inspection reveals, or whenever the employer has reason to believe, there are deviations from, or inadequacies in, the employee's knowledge or use of the energy control procedures. This training reestablishes employee proficiency and may introduce new or revised control methods and procedures, as necessary.

11.0 Periodic Inspection

The district conducts and documents periodic inspections on an annual basis. Documentation of the periodic inspections is maintained with this program and contains the following two components:

1. An inspection of each energy control procedure for equipment with more than one energy source.
2. A review of each employee's responsibilities under the energy control procedure being inspected.

12.0 Contractor Acknowledgement

If outside personnel or contractors are to be engaged in activities covered under the scope of this program, they are informed of the contents of this program, the way it functions, and other important details of the lockout/tagout program as it applies to the work being done. Contractors are required to comply with the provisions and procedures of this program unless otherwise noted. In some cases, the contractor is responsible to inform the school district of their own lockout/tagout procedures. The exchange of this information is documented and filed at the District Office.

13.0 Program Review

This program is reviewed on an annual basis. Changes or additions are made as soon as feasible and are communicated to affected or authorized employees.

Appendix A

Energy Control Procedure

Lockout Tagout Procedure

Type of Equipment: _____ Building: _____
Magnitude: _____ Location: _____
Approximate Number of Identical Units: _____ Date: _____

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 the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or equipment.*

Sequence of Lockout

1. Notify all affected employees that servicing, or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance. Affected employees may include custodians, food service staff, or industrial technology instructors.
2. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open switch, close valve).
3. De-activate the energy isolating device (e.g. knife switch, breaker, ball valve) so that the machine or equipment is isolated from the energy source.
4. Identify and isolate any other potential hazards (e.g. water).
5. Lock out the energy isolating device(s) with an assigned individual lock.
6. After checking that no personnel are exposed, verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.
7. Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.
8. The machine or equipment is now locked out.

Restoring Equipment to Service

When the servicing or maintenance is completed, and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken:

1. Check the machine or 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.
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 device and reenergize the machine or equipment.
5. Notify affected employees that the servicing or maintenance is completed, and the machine or equipment is ready for use.

Appendix B

Lock Removal

Appendix B

Northfield Public Schools
Lock Removal Form

Use this form for documenting the removal of locking devices by employees other than the original employee utilizing the LOTO device.

Date: _____ Time: _____ Employee completing form: _____

Location of Lockout being removed: _____

On what piece of equipment is the lock: _____

Why is the lock(s) being removed: _____

_____

_____

_____

Employee(s) who originally applied the lock: _____

Has the person who applied the lock been notified of lock removal? □ Yes □ No

Why not? _____

Name of Supervisor: _____

Contractor Representative (if applicable): _____

Copies sent to: _____

Filed? □ Yes □ No Where? _____