NORTH CAROLINA DIVISION OF MARINE FISHERIES

LOCKOUT / TAGOUT PROGRAM AND PLAN

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1.0 Purpose

The purpose of this program is to protect any North Carolina Division of Marine Fisheries (NCDMF) employee who performs any servicing or maintenance on machinery or equipment, where the unexpected energizing, start up or release of any type of energy could occur and cause injury. The machinery or equipment will be rendered safe to work on by being locked out or tagged out.

2.0 Scope and Applicability

Employees servicing or maintaining machines or equipment may be exposed to serious physical harm or death if hazardous energy is not properly controlled. Hazardous energy sources include, but are not limited to: electrical, mechanical, hydraulic, pneumatic, chemical, and thermal.

The standard does not apply in the following situations:

- While servicing or maintaining **cord** and **plug** connected electrical equipment. (The hazards must be controlled by unplugging the equipment from the energy source; the plug must be under the exclusive control of the employee performing the service and/or maintenance.)
- During **hot tap operations** that involve transmission and distribution systems for gas, steam, water, or petroleum products when they are performed on pressurized pipelines; when continuity of service is essential, and shutdown of the system is impractical; and employees are provided with an alternative type of protection that is equally effective.

This document details the areas of responsibility for managers, supervisors, employees, and service employees.

The safety plan affects all NCDMF employees who perform any servicing or maintenance on machinery or equipment.

3.0 Reference

This plan is established in accordance with Occupational Safety and Health Standards for General Industry (29 CFR 1910.147), Occupational Safety and Health Standards for Construction Industry (29 CFR 1926.417), and Occupational Safety and Health Standards on electric circuits and equipment (29 CFR 1910.333). Both standards are located on the NCDMF shared drive: \Safety.

4.0 Policy

It is the policy of the NCDMF to provide a place of employment that is free from recognized hazards that are likely to cause serious physical harm to employees. Therefore, employees will ensure that the machine or equipment is stopped, isolated from all potential hazardous energy sources and locked out before performing any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.
5.0 General Responsibilities

It is the responsibility of each manager, supervisor, and employee to ensure implementation of the NCDMF safety policies and Lockout-Tagout Program and Plans. Any employee who could be exposed to hazardous energy sources shall be instructed in the safety significance of the lockout or tagout procedure. Employees authorized to perform lockout or tagout shall receive training commensurate with their responsibilities and as per the OSHA requirements. It is also the responsibility of each NCDMF employee to report immediately any unsafe act or condition to his or her supervisor. Specific responsibilities are outlined under Section 6.3.

6.0 Procedures

This section provides applicable definitions, training, and specific responsibilities for the NCDMF’s Safety Policy on Lockout-Tagout.

6.1 Definitions

**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.

**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.

**Lockout device:**

Any device that uses positive means such as a lock, either key or combination type, to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment. When properly installed, a blank flange or bolted slip blind are considered equivalent to lockout devices.

**Tagout device:**

Any prominent wiring device, such as a tag and a means of attachment that can be securely fastened to an energy-isolating device in accordance with an established procedure. The tag indicates that the machine or equipment to which it is attached is not to be operated until the tagout device is removed in accordance with the energy control procedure.
Energy-isolating device:

Any mechanical device that physically prevents the transmission or release of energy. These include, but are not limited to manually-operated electrical circuit breakers, disconnect switches, line valves, and blocks.

Capability of being locked out:

An energy-isolating device is considered capable of being locked out if it meets one of the following requirements:
- It is designed with a hasp to which a lock can be attached;
- It is designed with any other integral part through which a lock can be affixed;
- It has a locking mechanism built into it; or
- It can be locked without dismantling, rebuilding, or replacing the energy isolating device or permanently altering its energy control capability.

Affected employee:

An employee who performs the duties of his or her job in an area in which the energy control procedure is implemented and servicing or maintenance operations are performed. An affected employee does not perform servicing or maintenance on machines or equipment and, consequently, is not responsible for implementing the energy control procedure. An affected employee becomes an “authorized” employee whenever he or she performs servicing or maintenance functions on machines or equipment that must be locked or tagged.

Authorized employee:

An employee who performs servicing or maintenance on machines and equipment. Lockout or tagout is used by these employees for their own protection.

6.2 Training

NCDMF must provide effective initial training and retraining as necessary and must certify that such training has been given to all employees covered by the standard. The certification must contain each employee’s name and dates of training.

NCDMF’s training program for authorized employees (those who are charged with the responsibility for implementing the energy control procedures and performing the service and maintenance) must cover, at minimum, the following areas:
- Details about the type and magnitude of the hazardous energy sources present in the workplace, and
- The methods and means necessary to isolate and control those energy sources (that is, the elements of the energy control procedure)
Affected employees (usually maintenance staff) and all other employees need only be able to (1) recognize when the control procedure is being implemented, and (2) understand the purpose of the procedure and the importance of not attempting to start up or use the equipment that has been locked or tagged out.

Training program must ensure that all employees understand the purpose, function, and restrictions of the energy control program and that authorized employees possess the knowledge and skills necessary for the safe application, use, and removal of energy controls.

Training programs used for compliance with this standard, which is performance-oriented, should deal with the equipment, type(s) of energy, and hazard(s) specific to the workplace being covered.

Retraining must be provided, as required, whenever there is a change in job assignments, a change in machines, equipment or processes that present a new hazard, or a change in energy control procedures.

Additional retraining must be conducted whenever a periodic inspection reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the employee’s knowledge or use of the energy control procedure.

### 6.3 Responsibilities

#### 6.3.1 Managers

Responsible to ensure that all employees are aware of this procedure and are trained in its use and application. All training is to be documented and sent to the NCDMF Human Resource Office to be kept in the employees file. Ensure that contractors are aware of this procedure. (See 6.3.4)

#### 6.3.2 Supervisors

Responsible to ensure that all maintenance personnel are aware of this procedure and are trained in its use and application. Names and job titles of employees who are authorized to lock out or tag out shall be documented and copies sent to the NCDMF Maintenance Supervisor. Each new or transferred employee whose work operations are or may be in the area shall be trained in the purpose and use of this lockout or tagout procedure. Supervisors shall verify the accuracy of existing written energy control (shutdown/startup) procedures, write them if they are non-existent, obtain adequate supplies, maintain the inventory and document the issuance of locks, tags, and locking devices.

Responsible to ensure that all outside personnel / contractors are aware of this procedure and are prohibited from doing any maintenance or service unless lockout/tagout procedures are followed.
6.3.3 Maintenance employees

Responsible to know and to understand the important safety significance of the procedure and its proper application. If violations of this procedure are observed, notify your supervisor, Section’s Safety Representative and the Division Safety Coordinator (Maintenance Services Section Chief) immediately.

6.3.4 Outside personnel / contractors

Responsible to understand the important safety significance of this procedure and its proper application and that any maintenance or service on equipment or machines is prohibited unless the lockout/tagout procedure is followed.

6.4 Procedure

6.4.1 Basic rules for using lockout or tagout system

- All energy sources to fixtures, equipment and/or machinery shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel.
- Note that isolating a piece of equipment from its source may not eliminate all potential hazards. Stored energy may be present within the equipment or machinery.
- Do not attempt to operate any switch, valve or other energy isolation device when it is locked or tagged out.
- Never remove a lock or tag for another employee. Only the employee placing the lock or tag may remove it. If there is a need to remove another employee’s lock or tag in an emergency, only the maintenance supervisor may do so after making every effort to contact the owner of the lock or tag.

6.4.2 Sequence to lock out or tag out

- The supervisor shall make a survey to locate and identify all isolating devices to be certain which switch(s), valve(s) or other energy-isolating devices apply to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical or others) may be involved.
- Verify the written energy control (shutdown/startup) procedure attached to the equipment or machinery, make necessary changes, supply the written procedure in the absence thereof, and send a copy of the procedure or changes to an existing procedure to the Division Safety Coordinator for review.
- The supervisor or maintenance staff shall notify all affected employees and customers that a lockout or tagout system is going to be utilized and the reason for that action. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.
- If the machine or equipment is operating, shut it down by the written energy control (shutdown) procedure attached to the equipment or machine (depress stop button, open toggle switch, etc.).
- Operate the switch, valve or other energy-isolating device(s) to ensure that the equipment is isolated from its energy source(s). Stored energy (such as that in spring, elevated machine members, rotating flywheels, hydraulic systems and air, gas, steam and water pressure, etc.) must be dissipated or restrained by methods such as repositioning, double blocking and bleeding down, etc.
- Lockout and/or tagout the energy-isolating devices with assigned individual lock(s) or tag(s). Tags shall indicate that the energy-isolated device(s) shall not be operated until after the removal of the tag.
- After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.
- Caution: Return operating control(s) to “neutral” or “off” position after the test.
- The equipment is now locked out or tagged out.

### 6.4.3 Restoring machines or equipment to normal production operations

- After servicing and/or maintenance are completed and the fixture, equipment or machinery is ready for normal operation, check the area around the fixture, equipment or machinery to ensure that no one is exposed.
- After all tools have been removed from the fixture, equipment or machinery, guards have been reinstalled and employees are in the clear, remove all lockout or tagout devices. Notify all affected persons that the lockout or tagout has been removed. Operate the energy-isolating devices to restore energy to the fixture, equipment or machinery following the written energy control (startup) procedure.
6.4.4 Procedure involving more than one person

- In the preceding steps, if more than one individual is required to work on the equipment or machinery, each shall place his/her own personal lockout device and/or tagout device on the energy-isolating device(s). When an energy-isolating device cannot accept multiple locks and tags, a multiple lockout or tagout device (box or hasp) may be used.

- If lockout is used, a single lock may be used to lock out the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use his/her own lock to secure the box or cabinet. As each person no longer needs to maintain his or her lockout protection, that person will remove his/her lock from the box or cabinet.

- When work must continue over a shift change the supervisor or lead worker must ensure that all employees are aware of which locks are to be replaced or left in place. All employees in the oncoming shift must be informed of the lockout/tagout conditions.

6.4.5 Additional requirements

1) Division Managers and supervisors should annually verify that all employees are in compliance with the requirements of this procedure. A periodic lockout/tagout inspection form shall be used and a copy of the completed form sent to the Division Safety Coordinator.

2) Initial training must be provided for all authorized and affected employees, repeated annually and documented. Additional retraining for all authorized and affected employees must be provided whenever there is a change in equipment, machinery, procedures or whenever there is evidence that this procedure is being violated.

3) Locks provided by facilities management are the only authorized locks to be used for equipment or machine lockout. Each lock should be keyed separately. One key issued to the authorized employee possessing the lock and the other key kept by the supervisor for emergency situations only.

4) Each lock should be identified as to its owner. In lieu of identification on the lock, an authorized employee’s personal tag can be applied in addition to his/her lock when locking out the equipment or machinery so that the lock’s owner can be readily identified.
5) The tags, padlocks and lockout devices used for locking out machinery and equipment should only be used for lockout and not for any other activity.

6) All equipment or machinery should be provided with appropriate energy isolating devices. Each such energy-isolating device should be clearly identified by a label. Only where such devices are not now existent may tagout be used.

- Whenever the equipment or machinery is modified or rebuilt, the energy control device must be altered to allow the incorporation of a lock for lockout purposes.
- When new or replacement equipment or machinery is ordered, the specifications shall include the capability of locking out the energy source(s).

7) All equipment or machinery that is required to be locked or tagged out shall have a written energy control (shutdown/startup) procedure attached to or near the main power switch for that equipment or machinery. This procedure is to identify all the energy sources which may be acting on this equipment and detail how each energy source is to be locked or tagged out. A copy of these procedures is to be sent to the Division Safety Coordinator for review.

8) The removal of a lock or tag by anyone other than the assigned employee who placed the lock or tag on the equipment or machinery is a very serious event and shall be documented with a copy of the documentation being sent to the Division Safety Coordinator. The supervisor should make every effort to locate the responsible employee, make a thorough examination of all machinery or equipment protected by the lockout or tagout to ensure that personnel, tools and equipment are clear, and notify their Section Chief before removing the lock or tag. Continue to make all reasonable efforts to contact the employee to inform him/her that his/her lockout or tagout device has been removed and to ensure that the employee has this knowledge before he/she resumes work.

9) A tagout device, including the means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment shall meet the following:

- Be able to be affixed by hand.
- Be non-reusable.
- Be self-locking.
- Requires a minimum unlocking strength of 50 pounds.
Note: One device which meets all of these requirements is a one-piece, all environment-tolerant, nylon cable tie.

6.4.6 Extras

Cord and plug equipment is exempt from the provisions of this procedure provided that the following two conditions are met.

- Power to the equipment or machine must be completely removed by unplugging.
- The authorized employee must have the plug under his or her exclusive control (i.e. in sight at all times). If not, the plug must be locked out.

6.5 Conclusion

An audit shall be performed annually by the Facilities Manager to ensure compliance with this written procedure.

This plan shall be reviewed annually.