



# Delaware County Regional Sewer District Standard Operating Procedure

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| Lockout and Tagout Procedures | May 29 <sup>th</sup><br>2014 | February 28 <sup>th</sup><br>2013 | 1          | 6     |

## 1.0 Purpose

- 1.1 This procedure is provided in order to increase the level of safety for the Delaware County Regional Sewer District (DCRSD) employees.
- 1.2 These procedures establish the minimum requirements to protect employees during machine and equipment servicing and maintenance where the unexpected energization, start up, or release of stored energy could occur and cause injury. This is also applicable while working on or near exposed energized electrical conductors and parts of electrical equipment. This equipment shall also be locked out and tagged out before work can begin.
- 1.3 These procedures shall be used to ensure that machines and equipment are properly isolated from hazardous or potentially hazardous energy sources during servicing and maintenance and properly protect against re-energization as required by the OSHA Control of Hazardous Energy Standard per 29 CFR 1910.147.

## 2.0 Definitions

- 2.1 **Affected Manager**-The Manager of an Affected Employee.
- 2.2 **Affected Employee**-An employee who works with equipment or works in the area around the equipment. The employee does not perform service or maintenance on the equipment but has the authorization to tagout the equipment.
- 2.3 **Authorized Employee**-An employee regularly performing service or maintenance on equipment and machinery. The employee is trained and authorized to implement lockout and tagout procedures to guarantee his and other associates protection. *The Maintenance Manager, Lead Maintenance Technician, Maintenance Technicians, Electronic Maintenance Technicians, Collection System Manager, Lead Collection System Technician, Collection System Technicians, Building and Grounds Technician and Package Plant Operators shall be Authorized Employees.*
- 2.4 **Energized**-Equipment and machinery is energized when they are connected to an energy source or contain residual or stored energy.
- 2.5 **Energy Isolating Device**-A mechanical device that physically prevents the transmission or release of energy such as; a manually operated electrical circuit breaker, a disconnect switch, a valve, and any similar device used to block or isolate energy.
- 2.6 **Energy Source**-Any source of electrical, mechanical, hydraulic, pneumatic, chemical, steam, thermal, or other energy.

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2.7 **JHSC**-The Delaware County Regional Sewer District *Joint Health and Safety Committee* comprising of eight management personnel and eight *Collective Bargaining Unit* personnel joined together to administer safety.

2.8 **Lockout**-Placing a lock on an energy isolating device according to an established procedure, ensuring that the fixture, equipment, or machinery cannot be energized until the lock is removed by an authorized person.

2.9 **Lockout Device**-A device that utilizes a positive means such as a lock and tag to hold an energy isolating device in a safe position and prevent the energizing of fixtures, equipment, or machinery. Note: The tag shall accompany the lock in all cases and shall contain all appropriate information to document the lockout event.

2.9.1 **Common Lock**-A lockout device, including tag, used by DCRSD personnel to lock out equipment.

2.9.1.1 The **Common Lock** shall have a universal key available to every *Authorized Employee* and *Manager* within the Department assigned to the **Common Lock**. See Section 4.2 and 4.4. The Maintenance Department and the Collections Department shall each have their own separate and unique Common Locks.

2.9.2 **Personal Lock**-A lockout device, including tag, individually assigned to DCRSD personnel with a unique and nontransferable key. See Section 4.3 and 4.5.

2.10 **Stored Energy**-All stored or residual energy including but not limited to pumps, piping, springs, pneumatic, or hydraulic systems shall be blocked or dissipated. If there is a possibility of the accumulation of stored energy, verification of its isolation must be continued until all servicing or repairs are complete.

2.11 **Tagout**-The placement of a tagout device on an energy isolating device according to an established procedure, clearly marked by means of a tag stating who has applied the tag and why the tag has been placed on the energy isolating device. The tag can only be removed by an *authorized employee*.

2.12 **Tagout Device**-Any prominent warning device, a tag and a means of attachment that can be securely fastened to an energy isolating device according to an established procedure. The tag indicates that the equipment or machinery must not be operated until the tagout device is removed by an *authorized employee*.

### 3.0 Authority/Responsibility

3.1 **Director**-Overall responsibility for these procedures.

3.2 **Operations Superintendent** - or his designee shall be responsible to ensure all DCRSD personnel are aware of these procedures and trained in their use and application. Ensure that all contractors are aware of these procedures.

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- 3.3 **JHSC**-Responsible for auditing the procedures, scheduling training and maintaining training records.
- 3.4 **DCRSD Manager**-Responsible to ensure that their supervised personnel are aware of these procedures, are trained in their use, and the procedures are properly followed.
- 3.5 **DCRSD Trainer**-The *Electronic Maintenance Technician II* shall be the designated trainer for this Standard Operating Procedure.

#### 4.0 General Rules

- 4.1 Locks, lockout kits, tags, chains, cable, wedges, or other hardware which meet the requirements in 1910.147 (c) (5) (ii) shall be provided by the DCRSD.
- 4.2 The Maintenance Department shall be issued **Common Locks** with common keys available only to the Maintenance Department personnel. Only the *Lead Maintenance Technician, Maintenance Technicians, Electronic Maintenance Technicians* and the *Maintenance Manager* shall be authorized to remove this lock.
- 4.3 Each *Maintenance Technician, Lead Maintenance Technician, Electronic Maintenance Technician* shall be issued **Personal Locks** with keys that shall remain unique to the Maintenance and Electronic Technicians and shall not be used by any other Maintenance Department personnel.
- 4.4 The Collections Department shall be issued **Common Locks** with common keys available only to the Collections Department personnel. Only *Lead Collection System Technician, Collection System Technicians* and the *Collection System Manager* shall be authorized to remove this lock.
- 4.5 Each *Collection System Technician* and *Lead Collection System Technician* shall be issued **Personal Locks** with keys that shall remain unique to the Collection System Technician and shall not be used by any other Collection Department personnel.
- 4.6 Each *Package Plant Operator* shall be issued **Personal Locks** with keys that shall remain unique to the Package Plant Operator and shall not be used by any other Package Plant Personnel.
- 4.7 Each *Building and Grounds Technician* shall be issued **Personal Locks** with keys that shall remain unique to the Building and Grounds Technician and shall not be used by any other plant Personnel.
- 4.8 Lockout devices shall be singularly identified and used for one purpose. They shall be the only devices used for controlling energy and shall not be used for other purposes.
- 4.9 The lockout devices and tagout devices shall indicate the identity of the employee applying the devices with the date of the application.
- 4.10 All machines and equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Lockout will also apply when working on or near exposed energized electrical circuits and parts.

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- 4.11 No employee shall attempt to operate any switch, valve, or other energy isolating device which is locked out.
- 4.12 Each lockout device shall only be removed by an *Authorized Employee* who applied the device or that employee's Manager. This procedure is described in Part 5.0.

**5.0 Lockout Procedures**

**5.1 Preparation for Shutdown**

- 5.1.1 In preparation for lockout, an Energy Audit Manual shall be prepared to locate and identify all energy isolating devices to be certain which switch, valve, or other energy isolating devices apply to the machine or equipment to be locked out. The Energy Audit Manual shall be continually updated and reviewed by the JHSC at least annually.
- 5.1.2 Before an *Authorized* or *Affected Employee* turns off a machine or piece of equipment, the *Authorized* or *Affected Employee* must have knowledge of the type and magnitude of the energy to be controlled, and the methods or means to control the energy.

**5.2 Machine or Equipment Shutdown**

- 5.2.1 The *Affected Manager and/or his designee* shall be notified that a lockout device is to be installed or has been installed and the reason. (See Section 6.2)
- 5.2.2 If the machine or equipment is operating, shut it down by normal stopping procedures, such as depressing the stop button, opening the toggle switch, or closing the valve. This will isolate the equipment from its energy sources. (See Energy Audit Manual).

**5.3 Applying the Lockout Device**

- 5.3.1 The *Authorized Employees* shall apply a **Personal Lock**, recording their name and date of application on the tag. The **Personal Lock** is applied any time a piece of equipment is removed from service for reasons such as, inspection, repair, preventative maintenance, or in the process of being repaired. This lock shall remain on the equipment until the maintenance or collections activities have been completed, the equipment is ready to return to service, or the *Authorized Employee* is called off the repair (see Section 5.3.3). This lock may temporarily be removed during repairs to facilitate the repairs or to perform diagnostic procedures. It must be reinstalled immediately upon completion of these activities.
- 5.3.2 When multiple *Authorized Employees* are performing work on the same piece of equipment, a group lock set must be used, requiring each employee to apply their own **Personal Lock**.

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5.3.3 If for any reason; e.g., end of work day, lunch break, called off the repair by a *DCRSD Manager*, becomes ill, or completes the repair activity; the *Authorized Employee* shall remove his **Personal Lock** and take it with him. The **Common Lock** (excluding Package Plant Operators and Building and Grounds Technician) shall be installed to replace the **Personal Lock** and shall remain on the equipment until the equipment is ready to be returned to service or it is replaced by a **Personal Lock**. Only an *Authorized Employee* installing the **Common Lock** or **Personal Lock** or his Manager shall be authorized to remove the **Lock**.

#### 5.4 Removal of Lockout Devices

5.4.1 After the servicing, maintenance, or repairs have been completed, the lockout devices shall be removed by the *Authorized Employee*.

### 6.0 Tagout Procedure

- 6.1 Any equipment removed from service by an *Affected Employee/Manager* shall be tagged as “Danger. Do Not Operate”. Only tags as specified in 29 CFR 1910.147 (c) (5) (ii) and (iii) shall be used. The tag shall identify the person applying the tag, the date, and the reason the tag has been applied. The equipment shall be de-energized and the tag attached with a zip tie to the equipment where a **Common Lock** or **Personal Lock** would normally be attached.
- 6.2 The appropriate Manager shall immediately be informed by phone and followed up as soon as possible by email that the equipment is tagged “Danger. Do Not Operate” and the Operations Manager, Maintenance Manager, or Collection System Manager shall initiate a work order for repair.
- 6.3 Upon arrival, the *Authorized Employee* shall update the tag with the appropriate information (see Section 6.1), attach a **Personal Lock**, and, if it is available, write the work order number on the tag. If maintenance personnel leave area, he shall remove the **Personal Lock** and attach a **Common Lock**.

### 7.0 Additional Requirements

#### 7.1 Outside Contractors

- 7.1.1 The *Operations Superintendent* or *DCRSD Manager* in charge of the repairs shall provide the *contractor* with this policy and receive, in exchange, a signed statement acknowledging receipt of and compliance with this policy before work can commence.
- 7.1.2 *Contractors* using lockout and tagout procedures to perform service, maintenance, or repair of equipment shall, at a minimum, comply with this procedure.
- 7.1.3 *Contractors* shall use their own locks. If the *contractor* leaves the equipment to which they have applied their lock before completion of the repairs, the

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*contractor* shall contact the applicable *DCRSD Maintenance Manager, Collection System Manager, or Operations Manager* to replace the contractor lock with a **DCRSD Common Lock**.

## 7.2 Training

- 7.2.1 All DCRSD *Affected Employees and Authorized Employees* shall receive training which includes but is not limited to the following topics:
- a. Recognition and types of hazardous energy sources
  - b. Methods, devices, and procedures used to lockout, verify lockout, and otherwise control hazardous energy on all types of equipment
  - c. Procedures to remove locks and return equipment to service
  - d. Transfer to lockout responsibilities
  - e. Group lockout procedures
- 7.2.2 Retraining-All DCRSD *employees* shall be retrained when their job assignment exposes them to new hazards or lockout procedures and when an employee incorrectly performs lockout procedures.
- 7.2.3 All newly hired *Affected Employees* shall be trained in Lockout and Tagout Procedures within 30 days of hire.