Monroe Municipal Utilities Authority Safety Manual

Updated November 2025

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CONFINED SPACE ENTRY PROGRAM

FOR THE MONROE MUNICIPAL UTILITIES AUTHORITY

Written: 4/18/80
Revised: 11/7/83
Revised: 2/17/88
Revised: 9/22/95
Revised: 5/5/01
Reviewed: 6/21/06
Revised: 2/10/2009
Reviewed: 4/30/14
Reviewed: 2/13/18
Revised: 1/2020
Reviewed: 6/23/2025

CONFINED SPACE ENTRY PROGRAM

The danger of hazards that are not easily seen, smelled or felt can represent deadly risks to the men and women who work in confined space areas.

A confined area or space is one which dangerous air contamination cannot be prevented or removed by natural ventilation. When a person works in this type of environment, the chance always exists that a reduced oxygen level or combustible or toxic gases may be present.

Each industry has its own specific problems and dangers. Prevention of injuries to the life and health of workers requires that they be properly trained and well equipped to recognize, understand and control the hazards they could encounter.

Before entry is made into a confined space area, a comprehensive written entry procedure should be followed. Always assume that a hazard is present and measure the environment before entry. If a hazard exists and purging is required, the environment should be re-measured for hazards before entry is made.

If you are required to work in or enter a manhole, wet wells, pumping stations, dry wells, ditches, chemical rooms, storage tanks, etc. your are working in a confined space.

What is Confined Space?

1. Limited openings for entry or exit
2. Unfavorable natural ventilation
3. Not designed for continuous worker occupancy

Limited Openings for Entry and Exit

Confined space openings are limited primarily by size or location and are usually small in size, as small as 18inches in diameter which makes it difficult to move easily. These openings may make it very difficult to get needed equipment such as respirators needed for entry into spaces with hazardous atmospheres, or life-saving equipment when rescue is needed. However, in some cases openings may be very large, access may require the use of ladders, hoist, or other devices, and escape from such areas may be very difficult in an emergency situation.

Confined Spaces Not Designed for Continuous Worker Occupancy

Most confined spaces are not designed for workers to enter and work in on a routine basis. They are designed to store, enclose materials or as transfer areas. When these spaces are entered for occasional inspections, needed emergency work for maintenance, repair or clean up, we are putting ourselves in spaces which are usually contaminated with dangerous gases where poor life supporting atmospheres and physical hazards are present. **EXTREME CAUTION** must be taken.

Unfavorable Natural Ventilation

Due to design, air may not move in and out of confined spaces freely, the atmosphere contained inside a confined space can be very different form the outside atmosphere, Deadly gases may be trapped, lack of oxygen may be present or the air may be so oxygen-rich causing a potential fire of explosion. A confined space may have one or all of these characteristics which complicates the problem when working in these areas or rescue is needed. If you were to survey your confined space, you would find one or all of these characteristics.

Hazards

The most important thing you must remember about confined space is that you must NOT trust your senses. The most common atmospheres that constitute Hazards are:

02 Deficiency- Atmosphere less than 19.5%. 02 Normal- Fresh air contains 20.9%

Any area that has less than 19.5% 02 should not be entered without S.C.B.A. (Self-contained breathing apparatus) or S.A.R. (Supplied air respirator)

At 16% 02 you have impaired judgement and difficulty breathing
At 14% 02 you have faulty judgement- rapid fatigue
At 6% 02 DIFFICULT BREATHING AND DEATH IN 5 MINUTES

You must also remember that the confined areas are not stable, so that you may, when entering these areas find favorable 02, but due to chemical reactions, cutting, brazing, or bacterial reactions will decrease the amount of 02 present. The amount of 02 present may be displaced by the presence of other gases such as carbon dioxide and nitrogen.

Toxic/Combustible Gases and Vapors

Under Toxic Gases there are two basic groups:

Asphyxiation- is by any gas displacing oxygen in the atmosphere. These gases are inert which have no affect on the body, but they displace the oxygen supply and you simply suffocate. The most common asphyxiate is Carbon Dioxide

CO2- When we inhale these gases in enough quantity the CO2 chemically combines with the hemoglobin in our red blood cells, which reduces our bloods ability to carry oxygen to our body tissue, including our brain.

Combustible- Atmospheres which explode or ignite if a source of ignition is present. Two things make an atmosphere flammable:

1. 02 in the air
2. Flammable gases or vapors; different gases and vapors have different flammable ranges. So if it has an ignition or even a spark from a tool or match, it may result in an explosion.

Some explosive gases encountered at our facility are:

Sewer Gas- contain a high % of carbon dioxide, methane, hydrogen sulfide, and a low % of 02 and nitrogen. These gases are found in all areas of plants and systems in some degree or stages, which are based on design, operation and maintenance

Ammonia- has a specific gravity of 0-60, so it is found in the top of structures and is explosive when mixed with air

Hydrogen Sulfide- 1.19 specific gravity-rotten egg odor, impairs sense of smell, at 0.01%, odor is not evident at high concentrations. Colorless, flammable, safe at 60 minutes exposure- .02%-.03% volume of air

Methane- .55 Specific gravity, flammable, colorless, odorless, tasteless

Oxygen- 1.11 Specific gravity, supports combustion, colorless, odorless, tasteless

Gasoline- Specific gravity 3.0-4.0, colorless odor, noticeable at .007% flammable

Carbon Dioxide- Specific gravity is 1.53, colorless, odorless, gives an acid taste, cannot endure more than 10% concentration for more than a few minutes even with normal 02.

Sulfur Dioxide- Colorless

Toxic Gases

We should be aware of these gases and anticipate them in our areas, we must always be prepared and not take anything for granted.

Having a handle on what might be encountered ; no one should enter a confined space without reviewing an entry permit. Not all permits will be the same, yet, they are all related to each other.

An entry permit is a document in which it authorizes entry as well as type and amount of work to be done in an area. It guarantees that all existing hazards have been evaluated by qualified person, and all protective measures have been taken to ensure the safety of all employees.

The supervisor or qualified person should be responsible for securing the permits and should sign the permit and pass it on to a supervisor once all hazards have been described.

**** Information located on the permit includes: See item #1**

General Physical Hazards

1. Temperature- extremely hot or cold temperatures can be present and create problems for workers. This can cause sweating or chills, which in turn creates problems

2. Engulfment Hazards- loose materials on the side of ditches and holes, could break loose covering someone or engulfing them

3. Noise- in a confined space, noise can be amplified because of design material used in construction. Loud or excessive not only can damage hearing, but impairs communication

4. Falling Objects- workers in confined space must be aware of falling objects, especially around manholes or meter pits where a lifting device is left up top

5. Slippery and Wet Surfaces- a concern always because of not only the dangers of slipping and falling, but along with electricity, water is a good conductor

6. Rodents and Insects- when encountered by these, it usually means that there is air although if oxygen is present it does not mean that toxic gases are not. Insect and rodent could also pose problems.

General Requirements

1. General Work Procedures
    a. Chain of command
    b. Start and stop time
    c. Job qualifications

2. Know Emergency Procedures
    a. Phone list
    b. Chain of command
    c. First aid procedures
    d. Location of emergency equipment and trained
    e. Pre-communication with medical help
    f. Trained between other agencies
    g. They know locations and hazards

Standard Safety Equipment

Equipment needed can be found at the plant and on all vehicles

1. Two-way radio or nextel

2. Tyvec clothing with elastic sleeves and ankles

3. IMPACT GAS DETECTOR- 02, exp, toxic, audible alarms, visible LED readouts

4. Full body harness- hook to safety line lifting from center of shoulders

5. Lifting device mechanism powered with labor hand power as stand by crane, tri-pod, etc.

6. Rubber gloves, boots, rain gear, steel toe shoes, face mask, goggles, dusk mask, respirators (personal sized, one for each employee for specific duties)

7. S.C.B.A. with back up bottle, positive pre-system

8. Ventilators- capable of exchange atmosphere

9. Non-sparking tools

10. Lifting devices

11. Buddy system and traffic controllers

Checking Physical Properties of Manholes of Vaults

1. Check surroundings for signs of backups, overflows, dead vegetables or animals, corrosion of door or lids

2. Open lids or doors with approved lifting devices. Check area with detectors for oxygen and other gases

3. Check rungs, ladders or steps for corrosion damage or dirt or other foreign matter which might cause slips or falls.

4. Enter using all safety devices (**Explain A-G**)
   a. Test manhole for gases
   b. Purge air supply line 1 minute before supplying air to manhole vault
   c. Purge area at least 5 minutes before entering (If atmosphere is ok)

d. Allow no flame within 10' of manhole
e. If line plugs are removed, test atmosphere again while leaving (leave tester in manhole if it is ok)
f. If ventilation equipment stops, get out of area IMMEDIATELY !
g. Repeat all procedures every hour

When supplying air, have the air go into the lowest area and exhaust bad air out at top.

All safety equipment should be inspected on a continual basis and repaired or replaced as needed.

Gas detectors should be calibrated by a certified operator at least semi-annually and recorded.
Employees must train on the Right to Know and Hazardous Communication Training every two years. New employees should be trained within 3 months of hiring. Employees should have physicals covering general health and should have their own pre-fitted safety gear. They should be trained in rescue and emergency operations.

Checklist for Working in Confined Space

	Requirements	Class A	Class B	Class C
1.	Permit	X	X	X
2.	Atmospheric Testing	X	X	X
3,	Monitoring	X	0	0
4.	Medical Surveillance	X	X	0
5.	Training of Personnel	X	X	X
6.	Labeling and Posting	X	X	X
7.	Preparation	X	X	0
	Isolate/lockout/tag			
	Purge and ventilate	X	X	0
	Cleaning Processes	0	0	0
	Requirements for special equipment/tools	X	X	0
8.	Procedures Initial Plan	X	X	0
	Standby	X	X	0
	Communications/ Observations	X	X	X
	Rescue	X	X	X
	Work	X	X	X
9.	Safety Equip.& Clothing			
	Head Protection	0	0	0
	Hearing Protection	0	0	0
	Hand Protection	0	0	0
	Foot Protection	0	0	0
	Body Protection	0	0	
	Respiratory Protection	0	0	
	Safety Belts	X	X	X
	Life lines, harness	X	0	
10.	Rescue Equipment	X	X	
11.	Record Keeping/Exposure	X	X	

X- REQUIREMENT

0- DETERMINATION BY A QUALIFIED PERSON

Confined Space Classification

In order to help define the situations where this program should be implemented, the following table is presented. The table provides a detailed description of the characteristics, oxygen content, flammability, and toxicity found in Class A, B and C spaces. Class A being the most hazardous and C being the least hazardous. There are different classifications for confined spaces, since some are more hazardous then others. With the increased hazard potential comes more complex rescue and communication procedures. These are outlined under the characteristics section of the table. The other sections give exact concentration levels to further determine what class of space it is. The Townships confined spaces should be classified so that workers will know the proper rescue and communication requirements to follow before entry.

Safety Equipment/Rescue System

The type of equipment needed and procedures followed will depend largely on the hazards found in a given Confined Space. This will also dictate the equipment to be used and the amount of personal protection to be employed.

In general: **If the Confined Space is Identified as a Class A or B**

Class A

1. Self Contained Breathing Apparatus (SCBA) or (SAR) Supplied Air Respirators should be available at the confined space site, and means of communication , such as a portable device will let the person outside of the space and know when something happens to the worker inside the space. The SCBA or SAR is worn when the standby person has to enter the space, the standby person shall be fully trained with regards to communication and air equipment

2. In any case, the rescuer shall not enter the space until additional rescue personnel are present

3. If an emergency occurs, the standby person should not enter the space until additional rescue people are present. After summoning for help, the standby person should attempt to rescue the worker using the life line from outside of the space

4. When rescue personnel enter a Class A or B space, they shall wear a fully charged; positive pressure SCBA or SAR, and be secured to a life line

Class B

If the Space does not pose an immediate threat to life Class C, then

1. The rescuer shall wear a SCBA or a supplied air respirator. The lines shall be readily available but not used during entry

2. In any case, rescuer shall not enter the space until additional rescue personnel are present

ALL WORKERS SHOULD BE FAMILIAR WITH BASIC FIRST AID PROCEDURES AND CARDIO-PULMONARY RESUSCITATION (CPR)

Following their classification; the Confined entrances shall be posted with the following:

1. ' DANGER CONFINED SPACE-ENTER BY PERMIT ONLY'

2. Warning signs shall be posted in English. Those who cannot read shall be informed by the supervisor of the hazards and the instructions noted on the signs

3. If specific work or safety equipment is needed, it should be identified on the sign

4. Within the immediate area, emergency procedures and phone numbers of police and medical departments shall be posted

How Hazards Occur

1. Previously stored products/chemicals
2. Unexplained leaks/spills
3. Chemical Reactions
    a. Manufacturing Process
    b. Products Stored
    c. Drying of Paints
    d. Oxidation/ Reduction
    e. Cleaning with acids/solvents, etc.
    f. Rusting of metals
    g. Rotting/Decomposing, Fermentation
        1. Basements
        2. Tunneling Operations
4. Operations Accomplished within Space
    a. Welding
    b. Painting

Ten Basic rules for Confined Space Entry

1. Planning sessions by qualified persons
2. Testing of Atmosphere
3. Ventilation
4. Training the personnel
5. Lockout/Tagout
6. Stand- by people/ Communication
7. Tools and Equipment
8. Entry Permit
9. Continuous Monitoring of Atmosphere
10. Record Keeping

"Engulfment" means the surrounding and effective capture of an employee by finely divided particulate matter or a liquid

"Entry" means any action resulting in any part of the face of the employee breaking the plane of any opening of the confined space and includes any ensuing work inside the confined space

"Entry permit" means the written authorization of the employer for entry under defined conditions into a confined space for a stated purpose during a specified time

"Entry permit system" means the system of the employer for assuring safe entry of an employee into and working within a confined space where entry is by permit only

"Hazardous atmosphere" means an atmosphere presenting a potential for death, disablement, injury, or acute illness from one or more of the following causes

1. A flammable gas, vapor, or mist in excess of 10% of its lowest flammable limit
2. An airborne combustible dust at a concentration that obscures vision at a distance of 5 feet or less
3. Less than 19.5% or more than 23.5% oxygen
4. An atmosphere concentration of any toxic or hazardous substance above the permissible exposure limits pursuant to N.J.A.C. 12:100-7, Standards for Toxic and Hazardous Substances
5. An atmospheric concentration of any toxic or hazardous substance that is known to the employer to present a safety or acute health hazard; or any condition immediately dangerous to life or health.

"**Hot work permit"** means the written authorization of the employer to perform operations that could provide a source of ignition, such as riveting, welding, cutting, burning, or heating in the confined space, or on the exterior surface of the space.

“Immediately” means rendering the atmosphere of a confined space nonflammable, nonexplosive or otherwise chemically non-reactive by displacing or diluting the original atmosphere with steam or a gas that is nonreactive with the atmosphere in the confined space

“Immediate severe health effects” means any acute clinical sign of a serious exposure-related reaction manifested within 72 hours after exposure

“**Inerting**” means rendering the atmosphere or a confined space non flammable , nonexplosive or otherwise chemically non-reactive by displacing or diluting the original atmosphere with steam or a gas that is non-reactive with the atmosphere in the confined space

“**In-plant rescue team**” means a group of two or more employees designated and trained to perform a rescue from a confined space in the workplace

“Isolation” means the positive prevention on any unwanted form of energy or other agent with a serious potential for hazard from entering the confined space by means, such as blanking, double block and bleed, or lockout and tagout

“Linebreaking” means the intentional opening in a confined space of a pipe, line or duct that is or has been carrying flammable, corrosive or toxic material, inert gas, or any fluid at a pressure or temperature capable of causing injury

“Not” - permitted condition” means any condition or set of conditions whose hazard potential exceeds the limits authorized by the entry permit

“Oxygen deficient atmosphere” means an atmosphere containing less than 19.5 percent oxygen by volume

“**Oxygen enriched atmosphere**” means an atmosphere containing more than 23.5 percent oxygen by volume

“**Permissible exposure limit**” means the maximum eight hour time weighted average of any airborne contaminant to which an employee may be exposed

2.2 Issuance of Permits

2.2.1 Entry into a confined space will only be authorized by the signature of the person in charge of the entry on the Entry Permit. The person in charge of the entry will only sign the Entry Permit after completing the Permit Check List. This will certify that all atmospheric testing and ventilation of the confined space has been completed, that the atmosphere in the confined space is safe for entry and that all hazard warning devices and safety equipment (including retrieval lines) are available at this site. The person in charge of the

entry will assure that an attendant is stationed at the entrance to the confined space throughout the period of work in the confined space.

2.3 Duties of the Person in Charge of Entry

1. Assure that the pre-entry portions (check list) of the permit are completed before any employee enters a confined space

2. Verify that the necessary pre-entry conditions exist

3. Verify, if an in-plant rescue team will be used, that the in-plant rescue team is available

4. Verify that the means for summoning the in-plant rescue team or other emergency assistance are operable

5. Terminate the entry upon becoming aware of a non-permitted condition

** IF THE PERSON IN CHARGE OF ENTRY IS PRESENT THROUGHOUT THE ENTRY AND WORK PERIOD, THIS PERSON MAY SERVE AS THE ATTENDANT**

2.4 Duties of the Attendant

1. Remain outside the confined space

2. Maintain continuous communication with all authorized entrants within the confined space by voice, telephone, visual observation, or other equally effective means. If it is not possible for one attendant to maintain communication with each entrant because of the work station of the entrant in the confined space, other arrangements shall be made to assure that the attendant is continuously aware of the location and condition of any entrant.

3. Know the procedure and have the means to summon indicate emergency assistance if needed.

4. Remain in his or her post and not leave except for self-preservation, unless replaced by an equally qualified individual while entry continues. The attendant shall order the entrants to exit the confined space if the attendant must leave and there is no replacement

5. Warn unauthorized persons not to enter and exit immediately if they have entered.

3.0 Training

3.1 Training for all Employees

A. All employees who may be exposed to confined spaces in the course of their employment shall be made aware of the appropriate procedures and controls for entry.

B. All employees shall be made aware that unauthorized entry into such spaces is forbidden

C. All employees shall be made aware that the consequences of unauthorized entry could be fatal, and that their senses are unable to detect and evaluate the severity of atmospheric hazards.

3.2 Training for Authorized Entrants

A. All authorized entrants and in plant rescue teams shall receive training, including annual re-training covering the issues of (b) through, (f) below prior to entering any confined space. The employer shall retain a written record of the hours and subject matter of such training.

B. Every employee before entering a confined space containing a potentially hazardous environment shall understand the nature of the hazard and the need to perform appropriate testing to determine if it is safe to enter.

C. Employees shall be taught proper use of all personal protective equipment, including respirators and clothing required for entry or rescue, and the proper use of protective shields and barriers.

D. Employees shall be training to exit from a confined space as rapidly as they can without help (self-rescue) whenever an order to evacuate is given by the attendant, or whenever employees recognize the warning signs of exposure to hazardous substances whose presence in the confined space is known or expected.

E. Employees shall be made aware of the toxic effects or symptoms to exposure to anticipated hazardous materials that may be inhaled or absorbed through skin. Employees shall be trained to relay an alarm to their attendant and to attempt self-rescue immediately on becoming aware of these effects.

F. Employees shall be trained in any modification of normal work practices that are necessary for work in confined space.

G. Employees performing atmospheric tests of the confined space shall be properly trained in the use and calibration of testing equipment.

3.3 Training for Person Authorizing or in Charge of Entry

A. The person in charge of entry shall be trained in:

1. Recognizing the effects of exposure to hazards reasonably expected to be present
2. Authorized procedures for summoning rescue or other emergency service
3. Recognition of the early behavioral signs of intoxification caused by contaminants or asphyxiates whose presence could be anticipated in the confined space
4. The requirements for entrants if the permit specifies that the function of the attendant will alternate among the authorized entrants
5. The requirements for in-plant rescue team if the attendant will have rescue duties that could require entry

3.4 Training for the Attendant

A. The attendant shall be trained in:

1. Proper use of communications equipment furnished by the employer for communicating with authorized entrants or summoning emergency or rescue service
2. Authorized procedures for summoning rescue or other emergency service
3. Recognition of the early behavioral signs of intoxication caused by contaminants or asphyxiates whose presence could be anticipated in the confined space
4. The training requirements for entrants if the permit specifies that the function of the attendant will alternate among the authorized entrants
5. The training requirements for in-plant rescue team if the attendant will have rescue duties that could require entry

CONFINED SPACE RESCUE STEPS

Manhole, Canted or Wet Well Rescue

- The Monroe Municipal Utilities Authority protocol for Confined Space Rescue from manholes, cantex stations and wet wells are to be followed when an employee working in a confined space becomes entrapped and needs immediate assistance.

- Call 911 immediately

- Notify your immediate supervisor to inform him of the current situation

- Depending on the situation, try extracting the employee from the confined space with the tripod of DBI retriever assembly

- Call for additional assistance if needed

- If the confined space needs to be entered by a 2nd party, hook up a secondary life line and use supplied air on an SCBA to assist in the rescue

- Make sure the work area is cleaned so supplied air hoses can't get pinched and emergency equipment has adequate access to assist if needed

- Once the DBI retriever has been used, it has to be sent out to get reset and recertified, Never try to reuse the DBI retriever once the pin has been pulled and used.

In Plant Rescue Team

4.1 An in-plant rescue team shall consist of personnel equipped with personal protection equipment, including respiratory protective equipment necessary for entry into a confined space and with the rescue and retrieval equipment the employer has provided for rescue from a confined space.

4.2 The rescue team shall be trained as authorized entrants and in the correct performance of the rescue functions assigned to them using the retrieval and rescue equipment furnished and in the proper wearing and use of any personal protective equipment, including respirators that they may use during an actual rescue.

4.3 A rescue team shall practice at least annually, removing simulated victims, such as dummies, mannequins, or real people through representative openings and portals which have the same size, configuration and accessibility as the confined space from which an actual rescue would be required.

4.4 At least one member of each rescue team shall hold current certification in basic first-aid and cardio-pulmonary resuscitation.

Test and Calibration of Gas Detectors

5.1 The impact gas detectors have a built in sensor board that contain all 4 gases. This gas detector has a built in audible warning system that tells when calibration is needed and when the gas sensor needs to be replaced. All work performed on the IMPACT DETECTORS is done by ALL INDUSTRIAL SAFETY PRODUCTS.

CONFINED SPACE ENTRY PERMIT

Date _____

For Entry of _____

Person in Charge _____

Authorized entrants _____

_____

_____

Attendant _____

Category _____ Duration of Work

_____ Specific Entry

PERMIT VALID FOR ONE WEEK PERIOD- 8 HOURS MAXIMUM

Before Entry- To be Initialed by Person in Charge:

_____ Traffic cones or barriers in place-collection system work

_____ Safety harness with retrieval tripod or truck- mounted hoist in place

_____ S.C.B.A. at site for emergency use

_____ Gas Detector- to be carried into confined space

_____ Valves tagged out (mark N/A if not applicable)

_____ Electrical equipment disconnected & locked out (or N/A) Protective clothing & equipment

_____ Atmospheric Testing- confined space tested for oxygen deficiency and toxic or flammable gases

_____ Ventilation- if oxygen deficiency or gases detected, install ventilation blower- fresh air intakes located away from toxic or flammable gases

_____ Atmospheric Testing- period of ventilation retest confined space. DO NOT ENTER UNTIL GAS DETECTOR INDICATES NO HAZARD!

During Entry and Period of Work:

_____ The attendant shall remain at the entrance to confined space and maintain communication with workers inside. In an emergency the attendant shall not enter the confined space until rescue assistance has arrived. The attendant shall wear a high visibility vest

PERSON IN CHARGE

CONFINED SPACES ENTRY

PERMIT-ANNUAL

FOR ENTRY OF

Date issued _____

Valid

until

_____

Authorized

by

_____

Checklist: To be dated and signed before each entry

Ventilation System Functioning:

Date	**Operator-Entrant**	**Date**	**Operator-Entrant**
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

GAS DETECTOR- TO BE WORN IN WETWELL:

Date	Operator-Entrant	Date	Operator-Entrant
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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Monroe Municipal Utilities Authority

Industrial Truck Safety

Written Program

Written: July 2004

Reviewed: August 2006

Revised: Feb 2009

Reviewed: May 2014

Reviewed Feb 2018

Reviewed: 6/23/2025

Purpose

To establish minimum guidelines to help protect employees from the hazards associated with the operation and maintenance of industrial vehicles such as backhoes, front end loaders, vehicle jacks, pallet jacks, forklifts, and any other types of powered industrial equipment used to move or handle material.

Training

Shall be provided initially and periodically to all qualified industrial truck operators.
The following training will go as follows:

- General operating principles, control usages, and the machines limitations
- All OSHA and DOT regulations on vehicle inspection
- Proper Personal Protective Equipment(PPE) to be worn
- Lockout/Tagout and safeguarding procedures required for maintenance tasks.
- Operator and pedestrian safety
- Environmental conditions that pose threats to the safe operation of equipment . such as poor soil / water hazards during trenching and excavation
- Identifying the hazards of other utilities located above and below ground
- Continuous hands on practice
- Loading and unloading of equipment
- Conduct Pre!Post inspections of all equipment being used

Definitions

Qualified Operator- A person who is responsible and can demonstrate by experience or training the ability to recognize hazards during the operation of industrial trucks Industrial Trucks- Includes forklifts, loaders, backhoes, tractors, crane trucks, and manlifts

Responsibilities

The Authority shall provide the operators initial training and retraining on both equipment operation and the safety procedures. Pre Post Inspections should be conducted and documented to ensure that all equipment is in good operating condition prior to and after usage. Forklifts must have a nameplate attached to it that is legible, stating the weight and load rate capacity. Employees shall be familiar with the operation and function of all controls and instruments associated with the equipment. They must understand that unusual operating conditions may require additional safety precautions or special instructions pertaining to job duties or tasks to be preformed. The operator must coordinate with other personnel to stand clear of the swing or maneuvering range of any industrial truck. Any

accidents involving personnel, structures, or equipment must be reported to your supervisor.

Standard Practices
All Industrial Equipment

- No employee is to operate a powered industrial vehicle unless they have been properly trained and authorized to do so by a Supervisor.
- No person except the operator shall be transported on powered industrial vehicles unless the vehicle is equipped with an additional seat.
- Never transport anyone in a backhoe bucket, crane, or on the forks of a lift-truck
- Power must be shut off and the keys removed when the operator exits the equipment
- When a powered industrial truck is not in use, the forks, bucket, platform, and hoe should be fully lowered, power is shutoff, and emergency brakes applied
- Operators are to use caution when visibility is limited.
- Never overload equipment. The load rating shall not be exceeded
- All industrial trucks should be equipped with an audible backup alarm
- Industrial trucks must be operated at safe distances from the edges of ramps, platforms, or excavation that could cause a vehicle to roll over
- Whenever a lift truck is used to lift a person, fall protection equipment shall be used
- Caution should be used not to contact overhead objects such as lights, wires, pipes and structures
- Extreme caution should be used when operating shovels, backhoes, forklifts, cranes, jet vac, or any other industrial trucks near other utilities
- Keep bucket booms, lifts, suction tubes etc.at least 10 away from energized power lines
- Forks, buckets, and hoes should be kept as low as possible whether it is loaded or unloaded for maximum stability
- No person shall pass or stand under the elevated area of a truck, whether it is loaded or unloaded unless it has been properly locked/tagged and securely supported
- All industrial trucks shall be inspected and documented for any defects and safe operation prior to use
- Use step(s) when entering/ exiting a vehicle. **NEVER JUMP OFF**
- All loads should be tied and fastened securely to prevent shifting
- Backhoes shall be operated on ground level whenever possible with stabilizers in position
- No material shall be unloaded from equipment that is elevated
- Tum equipment off when refueling
- Smoking is prohibited when fueling
- Use additional personnel to assist when needed

TRANSPORTATION OF EQUIPMENT

- Pre-trip inspections are extremely important for the over-the-road transportation of equipment and material. Falling debris from the vehicle or trailer could severely damage other vehicles or injure someone.
- Trailers that are to be loaded should be on level ground with the wheels blocked to prevent from movement
- Preplan a road route that will accommodate your weight limit and truck heights.
- The truck and trailer should be at rest before passing between them. The driver shall not move the truck until a visual all clear has been given

WHEEL CHOCKS/BLOCKING DEVICES

- Chock blocks should be used during tire changes, wheels, or when equipment is raised up for any reason
- Any vehicle that is over two tons should carry 2 chock blocks
- Be sure to remove chocks before moving a vehicle

BACKHOES

- Only trained personnel may operate a backhoe
- Before excavating with a hoe, the stabilizer must be lowered so that the rear wheels are just off the ground. The front bucket should then be lowered to the ground to level the machine.
- The backhoe should always be operated from inside the machine in a seated position.
- The stabilizers should be on a secure surface. Never dig under the stabilizers.
- Never leave a load hanging or suspended from a backhoe bucket. Always set the load down before exiting the machine.
- Always keep spoils far enough away from an open trench to prevent cave-ins.
- If a hoe is needed to move a heavy object, be sure that weight of the object is distributed evenly to prevent a tip over.
- When using the rear bucket on a hoe to lift heavy objects, always lift straight up and never to the side.
- Before exiting from the machine, be sure that the machine is completely stopped and the emergency brake is activated.
- Caution must be used when entering and exiting the machine when wet conditions are present. Be sure to watch your step and use the handle to prevent slippage off the machine.

FORKLIFTS

- No employee is permitted to operate a powered lift truck until they have been fully trained and authorized to do so by management.
- Under no circumstances should a person be transported on the forks of the lift.

- A full visual inspection should be conducted prior to and after the lift's usage.
- All loads must be equally balanced to prevent a tip over·
- No material should be unloaded from the lift that is elevated
- Keep the forks as low as possible when loading and unloading for stability
- If a load is so large that it obstructs the operators vision to go forward, turn the machine so that load is trailing.
- Always operate an industrial powered truck on a flat and level surface.
- When an industrial powered lift truck is to be left unattended, the forks should be completely lowered, emergency brake applied, power shut off, and the wheels blocked.

Manlift

- Only trained personnel are permitted to operate the lift.
- A visual inspection must be conducted prior to and after the• usage of the lift.
- Be sure to unplug the unit before moving the lift.
- Always operate the lift on stable and secure surfaces to prevent roll-over.
- Never exceed the weight capacity of the lift.
- All railings must be in place and secured when the lift is elevated.
- Do not stand or hang on the railings.
- Safety chains must be attached when raising or lowering the lift.
- Secure loads to prevent from falling.
- Be sure the lift is fully charged before operating.
- Caution must be taken to avoid contacting doors, structures, and overhead power lines when raising the lift.
- Always chock the wheels when necessary.

Front End Loader

Riding, standing and being raised in the front bucket of a loader is not permitted, and is subject to disciplinary action.

- The front bucket of the loader should not exceed 18 inches above the roadways when driving.
- The front bucket should not be carried to the height where it hinders the view of the driver.
- If a loader is being used to back fill a trench, always utilize another employee to assist.
- Under no circumstance should an employee attempt to pass underneath a raised bucket.

Track Machine (JCB)

- Trained personnel are only permitted to operate this machinery.
- Beware of overhead power lines and structures.

- Use a helper to assist in loading and unloading the machine.

- When articulating the machine, beware of your surroundings (people, cars, equipment, etc).
- Under no circumstance should an employee attempt to pass under a raised bucket.
- Individuals must be aware at all times on the movement of the machine.
- The operator should utilize other employee's when back filling with the machine.
- Secondary riders are prohibited and will be subject to disciplinary action. **Do Not Ride or stand on the Machine.**

Trench Tamper

- This tamper should be operated by trained personnel only.
- The trench should be graded evenly to allow the tamper to operate properly and to prevent rollover.
- Gradually vibrate the trench allowing the machine to operate accordingly.
- Get assistance to help with the backfill process.
- Stay clear of the machine when it is in operation.
- **Do not ride or stand on the tamper.**

MONROE MUA
FIRE PREVENTION PLAN

WRITTEN NOV 2004

REVIEWED JUNE 2006

REVIEWED JAN 2009

REVIEWED MAY 2014

REVIEWED FEB 2018

REVISED DEC 2019

REVIEWED 6/23/2025

MMUA FIRE EMERGENCY POLICY

1. Call 911
2. Warn all co-workers in area of the fire
3. Close all doors in fire area
4. Exit the building
5. DO NOT RETURN FOR ANY REASON
6. Staging area for all employees at the plant is the parking lot next to the telephone pole
7. Staging area for Main Street office employees is the parking lot on side of building
8. Staging area for 322 office employees is the parking lot at rear of building
9. Notify supervisor of fire
10. The person in charge will notify the Fire Department of any hazards in the building that is on fire

MONROE MUA FIRE PREVENTION PLAN

Purpose

OSHA'S Fire prevention plan regulation, found at 29 CFR 1926.24 and Subpart F do not specifically require a written plan but do require specific program elements. This plan addresses fire emergencies that could occur in any facility owned by the Authority such as well houses, operation buildings and equipment, and finally the main offices.

Under this plan, our employees will be informed of the plans purpose, preferred means of reporting fires and other emergencies, types of evacuations to be used in various emergency situations, and alarm system. This plan is closely tied into our emergency action plan where emergency escape procedures, route assignments, and procedures, and procedures to account for all employees after emergency evacuation has been completed.

All Monroe MUA personnel are trained and have complete understanding of the following rules and regulations:

- Work place fire hazards and their proper handling and storage procedures.
- Potential ignition sources for fires and ways to eliminate them.
- Types of fire equipment such as fire extinguishers and knowing how to operate them properly
- Regular job titles of personnel responsible for the maintenance of equipment and systems installed to prevent or control ignition of fires and fuel source hazards.

A copy of this plan will be kept on file located at 322 office and upon request is available through the Safety Coordinator Joe McGrail

The Fire Prevention Plan communicates to the employees the policy and procedures to follow when a fire takes place. The written plan is available for all who wish to see it.

If anyone has any objectives or any suggestions to improve the plan, please don't hesitate to contact your safety coordinator. We are open to any suggestions and improvements because "SAFETY IS OUR #1 PRIORITY". We strive for clear understanding, safe behavior, and complete involvement from all employees and management at the MUA.

Safety Coordinators Responsibilities

- Develop a written fire prevention plan.
- Immediately notify the Williamstown Fire or police departments in the event of a fire at any facility.
- Incorporate the fire prevention plan with the Emergency action plan.

- Conduct drills to ensure that all personnel are familiarized with all fire exits, and evacuation routes.
- Provide proper training on the usage of fire extinguishers.
- Make sure all fire codes and regulations are met accordingly.
- If an evacuation were to take place, the safety coordinator or supervisor will take a head count to assure that everyone is accounted for.

Workplace Fire Hazards

It is the intent of this Authority to assure that hazardous accumulations of combustible waste materials are controlled so that a fast developing fire, rapid spread of toxic smoke, or an explosion will not occur. Employees are made aware of materials in their workplace, and the degree of the hazard that each poses.

Annual "RIGHT TO KNOW" training will provide important information on what chemicals we deal with, and how we protect ourselves from them.

Potential fire hazards within the different facilities at the MMUA include the following:

- Combustible and Flammable Liquids
- Oil based paints
- Stains
- Paint thinners
- Solvents
- Cleaners
- Degreasers
- Gasoline
- Kerosene
- Propane
- Motor oil and waste oil
- Diesel fuel

Any container marked **FLAMMABLE**

2. Volatile Fumes

Volatile fumes may build up when certain materials and chemicals are used or stored in poorly ventilated areas. This includes any material or chemical in a container that warns against using in poorly ventilated areas or where sources of ignition are present.

3. Chemical Reactions

Explosion and/or fire can result when certain chemicals come in contact with other chemicals or water. This includes any container that warns against **Reactivity.**

4. Spontaneous Combustion

Rags, paper, and other combustible materials including but not limited to those contaminated with flammable liquids such as paints and oils. Kerosene for example, can ignite from rapid oxidation of it's own contents without heat from external sources.

5. Faulty Electrical Devices and Wiring

Overloaded circuits, faulty outlets and switches, defective electrical devices, and other electrical problems can potentially cause a fire. MMUA employees must report these conditions to their supervisors for immediate correction.

6. Faulty Gas Fired and Electrical Heaters

If not properly maintained and inspected heating equipment can cause a fire.

7. Smoking in the Workplace

Employees who smoke must dispose of the butts in the designated can. Improper disposal of cigarettes could cause a fire. The MMUA is a smoke free authority.
There is absolutely no smoking in any authority building.

Fire prevention measures must be developed for all fire hazards found. Once employees are made aware of fire hazards in their work areas, they must be trained in fire prevention, and practice them in their work areas. Under no circumstances should there be an accumulation of materials that combust or ignite. Any areas found starting to accumulate should be brought to their supervisors attention so that corrective action can be taken. Matches, cigarettes, propane are flammables that are found throughout MMUA sites. Any leaks or damage to these tanks must be reported immediately. These are fire hazards that have to be monitored daily. Fire protection equipment used at the MMUA includes fire extinguishers which are located in every facility and vehicles. There are 3 different extinguishers found on MMUA properties, ABC, dry chemical, CO2, and Class D used for magnesium fires. The Class D extinguishers are located in the welding areas. All fire extinguishers are checked monthly by the safety coordinator and checked annually by an outside licensed inspector to make sure they are to code.

Employees Responsibilities

1. Good housekeeping - fire prevention begins with good housekeeping practices. Avoid the accumulation of large amounts of paper and cardboard. These materials should be taken out to the dumpster immediately for disposal.
2. Rags contaminated with paint, oil, gasoline or other flammables must be disposed of promptly in an approved container or other approved methods.
3. Work areas must be swept and cleaned on a regular basis to avoid debris build up
4. Oil and combustible liquid spills must be cleaned up immediately with absorbent material and disposed of properly.

Storage of Flammables

All flammables must be stored in an NIOSH approved cabinet labeled - FLAMMABLE KEEP AWAY FROM FIRE. Combustibles and flammables must be kept in this cabinet.

Painting

When painting, make sure you have adequate ventilation in that particular area or use the painting booth with the ventilation on. Always use a respirator when painting indoors.

Reporting Hazardous Conditions

Every employee is required to report hazardous conditions and situations in the workplace to his crew leader or supervisor. The supervisors should have the hazard alleviated immediately.

Smoking

Employee's who smoke must do so in designated areas. Under no circumstances should an employee smoke around fuel tanks, combustibles, flammable or volatile materials.

Training

The Fire Prevention Plan

At the time of the fire, employees should know what type of evacuation is necessary what their role is in carrying out the plan. In cases of a large fire, total and immediate evacuation of all employees is necessary. However, in smaller fires, a partial evacuation could take place depending on where the fire is located. We must be sure that every employee knows his/her role in case of a fire to assure their safety.

This plan was written up for the intent that every MMUA employee fully understands how important the information contained in this document is in accordance to PEOSH'S Fire Protection Standards.
A better way of demonstrating our fire protection plan is by giving all the employees the opportunity to participate in actual evacuation drills, usage of fire extinguishers, how to recognize fire exits, assisting employees with disabilities, how to contain fires (shut windows and doors), and finally getting a head count.

It is the safety coordinator's responsibility to make sure that every employee has full understanding of this plan. If for some reason an employee doesn't understand, or has trouble comprehending what his role is, the safety coordinator must retrain him until he/she fully understands.

Failure to comply with the authority's policy concerning Fire Protection can result in a PEOSH citation and fines especially if an employee gets injured or killed.

Fire Prevention Equipment

The safety coordinator provides training for each employee who is required to use fire prevention equipment. Employees shall not use the equipment until proper training has been completed. Employees must demonstrate an understanding of the training and the ability to use the equipment properly before they are allowed to perform work requiring the use of the equipment.

Monroe Municipal Utilities Authority

Fall Protection Program

Written: Nov 2004

Reviewed: June 2006

Reviewed: Jan 2009

Reviewed: May 2014

Reviewed Feb 2018

Reviewed: 6/23/2025

This program establishes the Authorities requirements of PEOSHA's guidelines for complying with 1926.502(k)-1926 subpart M Appendix E

Fall Protection

Purpose

To protect employees from the hazards of falling off of equipment or getting struck by falling objects.

Definitions

Fall Arrest System (DBI) – A system used to prevent a fall from one level to another. Personal fall arrest systems should only allow a drop or free fall of 6 feet. Rescue systems should be set up so that no vertical free fall is possible.

Lifeline – A system consisting of a cable or flexible line for a connection to an anchorage to hang vertically or connecting two anchorages to hang horizontally. The anchorage also serves as a support system for connecting components such as fall arrest systems (DBI).

Anchorage – A strong secure support that provides an attachment setup for lifelines, lanyards, or other deceleration mechanisms.

Body Harness – Safety apparatus consisting of straps and hooks that is worn by a person with the means of attaching a lifeline or fall arrest system to it.

Competent Person – A person who is dependable and capable of identifying any hazardous or dangerous conditions using fall protection equipment.

Free Fall – The motion in which a fall arrest system locks when a sudden drop transpires causing the system to apply force to stop the fall.

Lanyard – A flexible line with connectors at both ends used for connecting harnesses and lifelines.

Guardrails – A protective barrier used to prevent falling from one level to another.

Snap hook – A connector that has a hooked shape feature with a normally closed clip that opens when depressed and closes when released to retain an object.

Fall Clearances – A distance a person has using a fall arrest system before hitting an object or ground. The following factors can determine the necessary clearance needed when using a fall arrest system:

a. Working height
b. Free fall distance
c. Harness movement

d. Height of the anchor
e. Deceleration rate
f. Complete connecting system setup length

Roll out – Occurs as a result of a connecting problem between the hook or clevis to its connector causing it to open unintentionally and release.

Deceleration Distance – A distance at which a person continues to drop vertically before stopping. This usually occurs after the lifeline and free fall distances have been exhausted.

Hazardous Gas Monitoring – Detection is required to monitor atmospheric conditions in a confined space.

Capacity – The maximum weight limit for a fall arrest system. This is based on the weight of the person, tools, clothes, PPE, etc.

Training
Training is provided to protect all employees who are exposed to fall hazards. They are taught how to recognize the hazards of falling and the procedures to minimize such hazards. Training shall include the following topics:

a. List fall hazards of all MUA sites
b. Manlift usage the do's and don't's
c. Correctly assembling, disassembling, maintaining and inspecting fall protection equipment.

Requirements
All employees are required to follow all the guidelines written in this document and report any damaged or outdated fall arrest equipment.

Standard Working Procedures
The MUA uses DBI/SALA equipment for fall protection. All fall protection equipment must be compatible with DBI/SALA. No substitutions or non-replacement components may be used that may affect the safety of the system.

Compatibilities for Connectors

- All connectors are considered to be compatible when they are designed to work together in such a way that their sizes and shapes won't cause their gate mechanisms to accidentally open.
- Connectors such as carabiners, hooks and D-rings are capable of lifting or supporting up to 5,000 lbs.
- Self-locking snap hooks are required.
- Non-compatible connectors may open up unintentionally.
- Only use DBI/SALA self-locking snap hooks and carabiners.

- Ensure that all connectors are compatible in size, shape and strength.
- Ensure that all connectors are fully closed and locked when being used.

DBI/SALA snap hooks and carabiners should not be connected to the following:

a. To a D-ring that has another connector attached.
b. To each other.
c. To an object that is odd shaped that could cause the snap hook or carabiner to open.
d. Lanyards.

Planning

- Inspect all parts and components of the fall arrest system before using.
- Inspect surroundings and clearances before setup (sharp edges, etc.)
- Determine what setup is best suitable for the job.

Harness Setup

- Grab the D-ring and lift up the harness (make sure the straps aren't twisted).
- Grasp the shoulder strap and place onto one arm.
- The D-ring should now be located on your back side.
- The leg and waste straps should be hanging freely.
- Slip the other free arm into the harness and position the shoulder straps correctly onto the shoulder (should not be twisted).
- Reach between your legs and grab a strap that should be hanging.
- Attach the right leg strap to the right leg buckle and repeat for the left leg.
- Attach the chest strap by passing the male buckle through the female buckle.
- The chest strap should be at least 6 inches down from the top of the shoulders.
- Attach remaining chest and leg straps through the loop keepers.
- The D-ring should now be located between the shoulder blades.
- Make all final adjustments (loosen or tighten) to legs, chest and shoulders.
- The center retrieval D-ring should be on top of the shoulders (not twisted).
- Ensure that all connects (carabiners, snap hooks) are secured properly to prevent rollout.

DON'T USE HOOKS OR CONNECTORS THAT WILL NOT CLOSE OR LOCK PROPERLY.

Inspection, Maintenance and Storage

- All equipment and hardware should be inspected before and after using for tears, wear, mildew etc. Any defective equipment should be brought to the attention of management immediately so it can be taken out of service and replaced.
- Harnesses should be inspected by the competent person in charge.
- Harness hardware such as buckles, D-rings, loopkeepers, etc. must not be damaged, cracked or broken.
- Buckles should work freely**.**
- Any stitching that is frayed, torn or stretched should be taken out of service.

- Clean full body hardness with mild soap and water (do not bleach).
- Remove excess water with a towel or rag and let it air dry.
- Store harnesses in a cool dry location. Keep it out of the direct sunlight.

WARNING: THOROUGHLY INSPECT THE HARNESS AFTER EXTENDED STORAGE. ALL DEFECTIVE EQUIPMENT MUST BE TAKEN OUT OF SERVICE IMMEDIATELY!

Manlift

The manlift should be operated by authorized personnel only. The following inspection must be done before operating the lift:

a. Disconnect battery charger from the battery
b. Check hydraulic fluid
c. Tires
d. Check surroundings for clearance
e. Wet stop wrongs could cause slippage
f. Make sure guardrails and chains are secure
g. Remove all unnecessary debris from the lift platform

Operation

The manlift should be operated by authorized personnel only. Instructions on the operation of the equipment are illustrated on the controller. **Remember to disconnect the power cord and check for clearance before moving the lift.** When using the lift, always keep the machine on a level ground. Failure to do so could cause the machine to tip. Keep the platform clean. This will eliminate any tripping hazards that could lead to a fall from the lift.

Bloodborne Pathogens Exposure Control Program For the Monroe Municipal Utilities Authority

Date Issued: December 2001
Reviewed: June 2004
Reviewed: January 2009
Reviewed: February 2018
Reviewed:: December 2019
Reviewed: February 2020
Reviewed: 6/23/2025

This program establishes the Authorities requirements of PEOSHA's (Public Employee Occupational Safety and Health Act) Blood borne Pathogens Standard Title 29 Code of Federal Regulations 1910.1030

Table of Contents

Purpose

The Monroe MUA has committed to provide a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following Exposure Control Plan (ECP) is provided to eliminate or minimize daily work exposures to Blood borne pathogens.

EMPLOYEE EXPOSURE POTENTIALS

I. **Employee Exposure Determination**

As part of the exposure determination section of the Utilities ECP (exposure control plan), the following are a list of locations in which occupational exposures can occur:

1. Sewage pumping stations- Calibrating and cleaning MDI's, wet well basket cleaning, pump maintenance and removing solids with the jet vac.

2. Jet vac usage during sewer manhole and liftstation work- Material and waste from sewer mains.

3. Replacing residential sewer clean outs- A resident accidentally flushes a toilet discharging waste into the work area.

4. Plunging sewer laterals- The splashing of waste water from incorrect plunging or the handling of the plunger immediately following the job completion.

5. Eel machine- The machine deals directly with potentially hazardous conditions from sewage. Septic conditions are quite common in blockages that require the use of this machine. The rapid movement of the eel cable projects waste water therefore creating a possible exposure.

6. Hydrogen Sulfide Testing- This testing requires the employee to extract sewage from designated manholes throughout town by using a PVC test tube. The sample is tested by dipping a test strip in the waste water therefore posing an exposure threat.

7. Grease Trap Inspection- A monthly inspection that requires an employee to check local businesses for grease and oil accumulations by dipping a plunger or screwdriver.

II. **Methods of Implementation and Control**

1.0 Universal Precaution

1.1 All employees will utilize universal precautions

Universal Precaution is an infection control method that requires employees to assume all

human blood and specified human body fluids are infectious for HIV, HBV, and other

Blood borne diseases that must be treated accordingly. (This includes Hepatitis C.)

2.0 Exposure Control Plan (ECP)

2.1 All employees are covered by the Blood borne pathogens standard and have received a copy of the plan. They have been given the opportunity to review the plan and respond to either the safety coordinator or management on issue's they don't understand.

New employees will receive a copy and explanation of the plan during their probationary

period. Once an employee becomes permanent they will receive a refresher training annually.

2.2 The safety coordinator is responsible for reviewing and updating the ECP annually or sooner when revisions have been made.

Personal Protective Equipment (PPE)

3.0 The proper personal protective equipment must be worn and utilized in accordance with the different job tasks. Training will be provided to new employees or new job assignments requiring personal protective equipment.

APPROPRIATE PPE IS REQUIRED FOR THE FOLLOWING TASKS:

TASKS	PPE REQUIRED
Cleaning Liftstations	Safety goggles, Rubber gloves with poly or neoprene gloves underneath.
Jet Vac	Hard hat, Safety goggles, vest, rubber gloves with poly or neoprene gloves underneath.
Residential Sewer Clean out Replacement	Rubber boots, Goggles, Leather gloves with poly or neoprene gloves underneath.
Sewer Lateral Plunging	Safety goggles or glasses, Rubber gloves with poly or neoprene gloves underneath.
Eel Machines	The **operator** must use goggles or glasses, poly or neoprene gloves under the gloves issued for the machine. The **assistant** must have glasses or goggles, poly or neoprene gloves under the rubber gloves.

3.1 As a general rule, all employees using ppe must observe the following precautions:

1. Wash hands immediately with disinfectant towelettes if skin comes in contact with wastewater.

2. Remove protective equipment that has been lightly contaminated and clean by washing or pressure washing. When PPE has been heavily contaminated discard in a plastic trash bag and throw it in the dumpster. Any torn or cracked PPE must also be discarded immediately.

3. All disposable gloves get thrown away **Do Not Reuse**.

4. Wear the appropriate face and eye protection when splashes of

infectious materials could pose an immediate danger.

5. If a garment is contaminated by blood or other potentially infectious material, discard in plastic bag and throw it in the trash dumpster.

Replacement of PPE will be at no cost to the employee.

Training

4.0 All employees of the Operation Department have occupational exposure to blood borne pathogens. Training is conducted annually by certified instructors. The instructors are usually from the Gloucester County Health Department of Frank McGlaughlin of the Monroe Township Office of Emergency Management. Any new employees will get an initial overview of the standard within his first thirty (30) days of employment. Additional training is also provided by the Joint Insurance Fund periodically throughout the year.

Vaccinations

4.1 All employees are vaccinated with the Hepatitis A and Hepatitis B vaccinations. Shots have been administered by Wedgewood Family Medicine and Interstate Mobile Care. Most people were offered a titre draw for the Hepatitis B virus. The employees whose counts were down were offered boosters.

All new employees who have received the Hepatitis vaccinations prior to employment must provide medical records stating when and where the shots were administered. Any employee who declines the Hepatitis B vaccination must sign a declination statement.

An example of this form will appear in **Appendix C** of this program**.**

The Hepatitis B vaccination will be provided to any employee who declines at first but accepts treatment later. All vaccinations received were administered in accordance with the United States Public Health Services recommended procedures.

Post Exposure Evaluation Follow-up and Procedures for Reporting, Documenting and Evaluating the Exposure

5.0 Should an exposure incident occur, contact management immediately. Each exposure must be documented by the employee on an Exposure Report Form.

Appendix D

A confidential evaluation will be given immediately and the following procedures will be performed:

1. Document the routes of exposure and how the exposure occurred.

2. Identify and document the individual (**See Appendix E)** unless the employer can establish that identification is not feasible or prohibited by state or local law. **(See Note #1)**

3. Obtain consent **(See Note #2)** and test the individuals blood immediately to determine HIV and HBV infectivity. The results of the blood test should be documented.

4. If the individual is known to be infected with HIV of HBV further testing is unnecessary.

5. Provide the exposed employee with the individuals test results and information about applicable disclosure laws and regulations concerning the individuals identity and infectious status.

6. After obtaining consent, collect exposed employees blood immediately after the exposure incident and test the blood for the HIV and HBV status.

If the employee does not give consent for the HIV testing during the collection of blood, preserve the sample for at least ninety (90) days. **(See Note #3)**

Record Keeping

6.0

Medical Records

7.0 Medical records are maintained for each employee with occupational exposure in accordance to **PEOSH's 29 CFR 1910.1020 Standard**

The Safety Coordinator is responsible for maintaining medical records. The records can be found in the filing cabinet located in the safety room. All records are kept confidential and will not be disclosed or reported without an employees written consent to any person within

or outside the Monroe MUA, except by law. Individual records shall be maintained through current employment and kept on file for thirty (30) years in accordance with **29 CFR 1910.1020.** Records shall be provided upon request to anyone having written consent of the employee within fifteen (15) working days.

Training Records

8.0 Blood borne pathogen training records will be kept by the Safety Coordinator in the file cabinet in the meeting room.

Records will include the following:

1. Dates of the training.
2. Name and qualifications of persons conducting the training.
3. Attendance sheets.
4. Certificates of course completion

Appendix A

Definitions

Blood	Human blood, human blood components and products made from human blood.
Blood borne Pathogens	Pathogenic micro-organisms that are present in human blood that can infect and cause diseases in humans. These pathogens include but are not limited to: **Hepatitis B (HBV) and Human Immunodeficiency Virus (HIV)**
Contaminated	The presence or the reasonably anticipated presence of blood or other potentially infectious materials as a result from a job duty.
Occupational Exposure	Exposure from blood or other infectious materials to the mucous membrane, eye or skin as a result from a employees job duty.

DECLINATION STATEMENT

I have been I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand th.at by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

_____ _____

Employee Signature Date

EXPOSURE INCIDENT REPORT

(Routes and Circumstances of Exposure Incident)

Please Print

Date Completed _____

Employee's Name _____ SS# _____

Home Phone _____ Business Phone _____

DOB _____ Job Title _____

Employee Vaccination Status _____

Date of Exposure _____ Time of Exposure _____ am O pm 0

Location oflncident (Home, Street, Clinic, etc) Be Specific: _____

Nature oflncident (Auto Accident, Trauma, Medical Emergency) Be Specific: _____

Describe what task(s) you were performing when th.e exposure occurred. Be Specific: _____

Were you wearing personal protective equipment (PPE)? Yes 0 No 0

If yes, list _____

Did the PPB fail? Yes 0 No D

If yes, explain how: _____

What body fluid(s) were you exposed to (blood or other potentially infectious material)? Be specific _____

Continued on back

REQUEST FOR SOURCE INDIVIDUAL EVALUATION

Dear (Emergency Room Medical Director, Infection Control Practitioner):

During a recent transport of a patient to your facility, one of our prehospital care providers was involved in an event which may have resulted in exposure to a Bloodborne Pathogen.

I am asking you to perform an evaluation of the source individual who was transported to your facility. Given the circumstances surrounding this event, please determine whether our prehospital care worker is at risk for infection and/or requires medical follow-up.

Attached is a "Documentation and Identification of Source Individual" form which was initiated by the exposed worker. Please complete the source individual section and communicate the findings to the designated medical provider.

The evaluation form has been developed to provide confidentially assurances for the patient and the exposed worker concerning the nature of the exposure. Any communication regarding the findings is to be handled at the medical provider level.

We understand that information relative to human immunodeficiency virus (HIV) and AIDS has specific protections under the law and cannot be disclosed or released without the written consent of the patient. It is further understood that disclosure obligates persons who receive such information to hold it confidential.

Thank you for your assistance in this very important matter.

Sincerely,

_____

CONFIDENTIAL

DOCUMENTATION AND IDENTIFICATION OF SOURCE INDIVIDUAL

Name of Exposed Employee_____

Name and Phone Number of Medical Provider Who Should be Contacted:

_____

Incident Information

Date:_____

Name or Medical Record Number of the Individual Who is the Source of the Exposure:

_____

Nature of the Incident

0 Contaminated Needlestick Injury
0 Blood or Bodyfluid Splash Onto Mucous Membrane or Non-Intact Skin

Other: _____

Report of Source Individual Evaluation

Chart Review By _____ Date: _____

Source Individual Unknown - Researched by _____
Date:_____

Testing of Source Individual's Blood Consent Obtained 0 Refused 0

Check One:

0 Identification of source individual infeasible or prohibited by state or local law. State why if infeasible.

0 Evaluation of the source individual reflected no known exposure to Bloodbome Pathogen

0 Evaluation of the source individual reflected possible exposure to Bloodborne Pathogen and medical follow-up is recommended.

Person Completing Report:_____ Date:_____

Note: Report the results of the source individual's blood test to the medical providernamed above who will inform• the exposed employee, Do not report blood test findings to the employer.

HIV related information cannot be released without the written consent of the source individual.

CONFIDENTIAL

EMPLOYEE EXPOSURE FOLLOW-UP RECORD

Employee's Name _____ Job Title _____

Occurrence Date _ _ _ _ _ _ _ _ _ _ _ Reported Date _____

Occurrence Time _____ am O pm 0

SOURCE INDIVIDUAL FOLLOW-UP

Request Made to _____
Date _____ Time _____ am O pm0

EMPLOYEE FOLLOW-UP

Employee's Health File Reviewed by _____ Date- -----

Information given on source individual's blood test results Yes O Not Obtained 0

Referred to healthcare professional with required information

Name of healthcare professional _____

By Whom _____ Date _ _ _ _ _ _ _ _ _

Blood Sampling/Testing Offered

By Whom _____ Date _ _ _ _ _ _ _ _ _

Vaccination Offered/Recommended

By Whom _____ Date _ _ _ _ _ _ _ _ _

Counseling Offered

By Whom _____ Date _ _ _ _ _ _ _ _ _

Employee Advised of need for further evaluation of medical condition

By Whom _____ Date _ _ _ _ _ _ _ _

POST EXPOSURE EVALUATION

_____ will review the circumstances of the exposure incident to determine if procedures, protocols and/or training need to be revised.

Note to Employer:

Note #1: New Jersey Law N.J.S.A. 26-5C et.seq. and Regulation N.J.A.C. 8:57-2 requires information about AIDS and HIV to be kept confidential. While the law requires reporting of positive HIV results to the State Health Department, the law strictly limits disclosure of HIV-related information. When disclosure of HIV-related information is authorized by a signed release, the person who has been given the information MUST keep it confidential. Redisclosure may occur ONLY with another authorized signed release.

Note #2: If during this time, the exposed employee elects to have the baseline sample tested, testing shall be done as soon as feasible.

Note #3: Appendixes D, E, and R are optional forms which have been provided to assist employers with gathering infromation that is required by the standard. If an employer chooses not to use these forms, this information must still be provided and recorded in accordance with the Standard. Also note that HIV Confidential Case Report form and/or the AIDS Adult Confidential Case Report form, as well as the HIV Testing Policy information applicable to New Jersey public sector employees can be obtained by contacting:

The New Jersey State Department of Health and Senior Services
Data Analysis Unit
PO Box 363
Trenton, NJ 08625-0363
609-984-6204

Note #4: Following an exposure incident, prompt medical evaluation and prophylaxis is imperative. Timeliness is, therefore, an important factor in effective medical treatment.

Respiratory Protection Program for the Monroe Municipal Utilities Authority

Date Issued: April 2003
Revised: June 2006
Reviewed: January 2009
Reviewed: May 2014
Reviewed: February 2018
Reviewed: 6/23/2025

This program establishes the M.U.A.'s Requirements of
PEOSHA'S (Public Employee Occupational Safety and Health Act) Respiratory Protection Standard (**29 CFR 1910.134)**

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Purpose

The Monroe MUA has determined that the employees in the Operations Department are exposed to respiratory hazards during routine checks of wells and lift stations. These hazards include hydrated lime dust particles, calcium hypochlorite tablets and sewer gases. Some of these hazards represent IDLF (Immediate Dangers of Life and Health conditions). The purpose of this written program is to set forth standards to protect all employees from the exposure of respiratory hazards.

DEFINITIONS

Air Purifying Respirators (APR)- A respirator with an air-purifying filter or cannister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-Supplying Respirator - A respirator that supplies the respirator user with breathable atmosphere and includes Supplied Air Respirators (SARS) and Self Contained Breathing Apparatus (SCBA) units.

Canister or Cartridge - Container with a filter, sorbent, catalyst, or a combination of these items. Removes specific contaminants from air passed through the container.

Demand Respirator - Atmosphere-supplying respirator that admits breathing air to the face piece only when a negative pressure is created inside the face piece by inhalation.

Employee Exposure - Exposure to a concentration of an airborne contaminant that would occur if the employee was not using respiratory protection.

Fit Factor- Quantitative estimate of the fit of a particular respirator to a specific individual and typically eliminates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit Test- The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

IDLH- Immediately dangerous to life and health.

Negative Pressure Respirator- Respirator in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen Deficient Atmosphere- An atmosphere with an oxygen content below 19.5% by volume.

Physician or Other Licensed Health Care Professional (PLHCP)/ Interstate Mobile- An individual who is legally permitted scope of practice allows him or her to independently provide, or be delegated the responsibility to provide some or all of the health care services.

Positive Pressure Respirator- A respirator in which the pressure inside the respirator inlet covering exceeds the ambient air outside the respirator.

Powered Air-Purifying Respirator (PAPR)- Air purifying respirator that uses a blower to force the ambient air through the air-purifying elements to the inlet covering.

Pressure Demand Respirator- A positive pressure atmosphere supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.

QLFT- Qualitative Fit Test- Only used to fit test either (Power Air-Purifying Respirator) SCBA's, or negative pressure APR's
(Moldex 8000) that must achieve a fit factor of 100 or less.

ONFT- Quantitative Fit Test used to fit test negative pressure respirators when a minimum Fit Factor of 100 is achieved for tight-fitting half-face pieces and 500 for full-face pieces.

Respiratory Inlet Covering- The portion of the respirator that forms the protective barrier between the user's respiratory and an air purifying device or breathing air source or both.

SCBA- Self Contained Breathing Apparatus- Atmosphere supplying respirators that for which the breathing air source is designed to be carried by the user.

Supplied-Air Respirator (SAR)- An atmosphere supplying respirator which the source of breathing air is not designed to be carried by the user.

Fit Testing

Fit testing is required for all employees of the Operations Department of the Monroe Municipal Utilities Authority. This is to ensure that all personnel using SCBA SAR (Supplied Air Respirator), or half-face piece APR's are fitted properly to provide protection. Each employee will be fit tested with the make, model and size of the respirator that they will use.

Fit testing may be either Qualitative or Quantitative. Qualitative (QLFT) involves the introduction of a gas, vapor or aerosol agent into the area around the head of the respirator user. If the person can detect the test agent through taste, odor or irritation, the respirator fit is inadequate.

In a Quantitative respirator fit test (QNFT), the adequacy of the respirator fit is assessed by measuring the amount of leakage into the respirator either by generating a test aerosol as a test atmosphere or by using ambient aerosol as a test agent.

The Monroe Municipal Utilities Authority requires that the employees are fit tested at the same time with the same make, model, style and size of respirator. A retest will be needed due to the following:

a. Before any of our employees are required to use any respirator with a negative or positive pressure tight fitting face-piece.
b. When a different respirator face-piece (make, model style and size) is used.
c. Annually.
d. When the Authority observes a change in the employees physical condition that could affect the respirator fit. Conditions may include but are not limited to facial scarring, dental changes, cosmetic surgery or change in body weight.
e. If the company doing the fit testing declares an employees respirator unacceptable, that person will be retested with a different size respirator face piece.

CHECKLIST FOR PROPER USE OF RESPIRATORS

1. Workers using tight fitting respirators have no conditions; such as facial hair that could interfere with a proper facial seal or valve function.

2. Workers wearing prescription glasses, goggles or other protective equipment that does not interfere with the proper face piece seal or valve function.

3. Workers perform seal checks on tight fitting respirators.

There are procedures for the use of a respirator in IDLH atmospheres for the entries of lift stations, sewer manholes and the holding tanks. These procedures are written to ensure the following:

A. Any personnel entering a confined space atmosphere must have written or verbal permission from management.

B. The appropriate number of standby personnel.

C. Standby personnel and employees in an IDLH environment maintain communication.

D. Standby personnel are properly trained, equipped and prepared.

E. Management will be notified when standby personnel has to enter any IDLH atmospheres.

PROCEDURES FOR IDLH ATMOSPHERES

1. One or more employees when needed are located outside the IDLH.

2. Visual, voice or signal line communication is maintained between the employees inside the IDLH and the employees outside the IDLH.

3. The employees located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.

4. The supervisor must be notified before a person is to enter the IDLH atmosphere to contact emergency rescue if needed.

MAINTENANCE

Respirators are to be properly maintained at all times in order to ensure

that they function properly and adequately to protect the employee.

Maintenance involves a thorough visual inspection for cleanliness and defects.
The worn or deteriorated parts will be replaced prior to use.

The following checklist will be used when inspecting respirators:

1. Face piece: cracks, tears or holes, facemask distortion, cracked or louse lenses/face shield.

2. Head strap: breaks or tears, broken buckles.

3. Valves: residue or dirt, cracks, tears in valve material.

4. Filters and Cartridges: approval designation gaskets, cracks or dents in housing, proper cartridge for hazard.

5. Air Supply Systems: breathing air quality/grade condition of supply hose, hose connections, settings on regulators and valves.

For the SCBA, in addition to the above monthly we maintain air oxygen cylinders in a fully charged state and recharged when the pressure falls to 90% of the manufacturer's recommended pressure level to determine that the regulator and warning devices function properly. All SCBA's will be serviced annually or repaired when needed.

AIR QUALITY

For supplied-air respirators only grade D breathing air shall be used in the cylinders. The Monroe MUA has three cylinders, two of which are in work trucks and one in the mechanics shop.

STORAGE

Respirators must be stored in a clean, dry area and in accordance with the manufacturers recommendation. Each employee will clean and inspect their own air purifying respirator in accordance with the provisions of this program. They will store their respirator in a plastic bag in their own gym locker or truck. Each employee will have their name on the bag and that bag will only be used to store that employees respirator. All employees are responsible for their own respirator. The SCBA respirators will be stored in the map room.

MEDICAL EVALUATIONS

All Monroe Utilities Authority personnel in the Operations department must be medically evaluated by a physician to determine if he/she is qualified to wear a respirator. Employees who are required to wear respirator must pass a medical exam before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until the physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be permitted to work in an area requiring respiratory use. The employee must provide a written statement to management stating why they refused the medical evaluation. A licensed physician will provide the following medical evaluations:

1. The medical evaluation will be conducted using the questionnaire of the Respiratory Protection Standard provided by Interstate Mobile.

2. All employees will be given a copy of the questionnaire to fill out.

3. Follow up medical exams will be granted to employees as required by the standard, or as deemed necessary by the physician.

4. All employees will be granted an opportunity to speak with the physician about their medical evaluation if they choose to do so.

5. Any employee required for medical reasons to wear a positive pressure air purifying respirator will be provided with a powered air purifying respirator.

After an employee has received clearance and has begun to wear their respirator additional medical evaluations will be provided under the following conditions:

1. The employee reports signs or symptoms in their ability to use a respirator such as shortness of breath, dizziness, chest pains or wheezing.

2. The physician or supervisor informs the program administrator that the employee needs reevaluation.

3. Information from this program including observations made during the fit testing and program evaluation indicates a need for reevaluation.

4. Workplace conditions changed causing an increase in physical burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the physician.

MAINTENANCE AND CLEANING PROCEDURE

The Monroe MUA provides each employee with a respirator that is clean, sanitary and in good working order. They ensure that all respirators are cleaned and disinfected using the procedure below:

CLEANING

1. Disassemble respirator removing any filters, cannisters and cartridges.

2. Wash the facepiece and associated parts in a mild detergent with warm water. DO NOT use organic solvents.

3. Rinse completely n clean warm water.

4. Wipe the respirator with disinfectant wipes to kill germs.

5. Air dry in a clean place.

6. Reassemble the respirator and replace any defective parts.

7. Place in clean dry plastic bag or other air tight container.

Note: If a Moldex ½ face respirator gets damaged or does not fit, notify Ralph or a safety coordinator to provide a new one. The safety coordinator will provide cartridges when needed for the Moldex ½ face respirator.

DEFECTIVE RESPIRATORS

All defective respirators must be reported to the immediate supervisor or Safety Coordinator. If the respirator is out of service for an extended period of time or is unrepairable, the employee will be given a replacement of a similar make, model and size.

TRAINING

All Monroe MUA personnel will be provided proper training on respirators. Each employee will understand the contents of this respiratory program and their responsibilities under it as well as the PEOSH Respiratory Protection Standard. All workers will be trained prior to using a respirator in the work place.

The training course will cover the following topics:

1. The Monroe MUA Respiratory Protection Program.
2. The PEOSH Respiratory Standard.
3. Respiratory hazards encountered at MUA sites.
4. Proper selection and use of respirators.
5. Limitations of respirators.
6. Usage of respirator in emergency situations.
7. Fit testing.
8. Maintenance and Storage.
9. Medical signs and symptoms limiting the effective use of respirators.
10. General requirements of 29CFR 1910.134

Employees will be retrained annually or as needed. Each employee will demonstrate their understanding of the topics in the training through hands on exercises. All training will be kept on file in the safety meeting room.

RESPIRATORY PROGRAM EVALUATION

The safety coordinators will conduct periodic evaluations of the workplace to ensure that all standards are met in accordance with this program. The evaluations will include periodic inspections of all Monroe MUA sites, constant employee communication and finally a review of all records and updates. Any problem or change should be reported to the immediate supervisor or safety coordinator so that corrective measures can be made.

DOCUMENTATION AND RECORD KEEPING

Written copies of this program and the Respiratory Protection Standard are located in the safety meeting room and in the central file in the lunch room. The safety coordinators will have updated records of all employees training, fit records as well as all respiratory equipment documentation (types, serviced, etc.) The completed medical questionnaire and the physicians documented files are confidential and will remain at the carrier that completed the testing. The Monroe MUA will only keep the physicians written recommendation regarding each employees ability to wear a respirator.

VOLUNTARY AND REQUIRED RESPIRATOR USE AT ALL MONROE MUNICIPAL UTILITIES AUTHORITY SITES

Respirator Type	Location
Filtering facepiece	Voluntary use
Dust mask NON-IDLH	For sweeping garages
Moldex 8000 series half facepiece with a P-100 filter	Adding hydrated Lime to #8 well NON-IDLH
Moldex 8000 series half facepiece with a 8600 series multi-gas organic cartridge	Pumping down holding tank at plant. Pulling floats, MDI or baskets from pump stations IDLH
Moldex 8000 series or half facepiece with a 8600 series multi-gas organic cartridge	Using lacquer thinner prep solvents in the mechanics shop NON- IDLH
Moldex ½ face Apr with a 8600 multi-gas	Using all spray paints NON-IDLH
SCBA -Self -Contained Breathing Apparatus or SAR- Supplied-Air Respirator	All sewer manhole work, all sewer liftstations (entering work) Operations (cleaning holding tank) IDLH

Personal Protective Equipment (PPE) for the Monroe Municipal Utilities Authority

Date Issued: December 2019
Revised: September 2025

https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toe_level=O

DISCLAIMER

The job descriptions contained within this document are not intended to limit or replace the civil service job description. Information contained herein is for safety purposes only. Should new tasks be included as part of the employee's work tasks, Monroe MUA management will conduct a hazard analysis of the specific task and develop the appropriate control measures.

PERSONAL PROTECTIVE EQUIPMENT {PPE)

TABLE OF CONTENTS

1.0 DEFINITIONS

Personal Protective Equipment (PPE) includes all clothing and accessories such as respirators, aprons, shoes, gloves, eye protection, etc., designed to create a barrier against workplace hazards. PPE does not eliminate the workplace hazard. If the equipment fails, exposure will occur. To reduce the possibility of failure, equipment must be properly fitted and maintained in a clean and serviceable condition. Additionally, proper PPE needs to be selected for the work at hand, and employees and management personnel must understand the equipment's purpose and its limitations.

Clo Value is the measure of the capacity of chemical protective clothing to dissipate heat loss through means other than evaporation.

Type 1 Safety hard hat - Helmets that provide protection from blows to the top of the head only.

Type 2 Safety hard hat - Helmets that provide protection from blows to both the top and sides of the head.

Class G Safety hard hat - Equivalent to old Class A helmet. This provides general protection and electrical protection to 2,200 volts.

Class E Safety hard hat - Equivalent to old Class B helmet. This provides extended electrical protection to 20,000 volts.

Class C Safety hard hat - Equivalent to old Class C helmet. This provides no electrical protection.

Permeation is the process by which a chemical dissolves in, and/or moves through a protective clothing material on a molecular level.

Degradation is the loss of or change in the fabric's chemical resistance or physical properties due to exposure to chemicals, use, and/or ambient conditions.

Breakthrough Time - The length of time from initial exposure until the hazardous chemical is detectable on the inside of the chemical protective clothing.

Penetration is the movement of chemicals through zippers, stitched seams, or imperfections in protective clothing.

2.0 PURPOSE

The Monroe Municipal Utilities Authority intends to provide a hazard free environment for all of its employees. The purpose of this program is to protect employees against potential hazards which may be present at the workplace by establishing protocols for the proper selection, use, and care of Personal Protective Equipment (PPE) by workers during Monroe MUA's operations.

3.0 SCOPE

The Monroe Municipal Utilities Authority has adopted the policies and procedures identified in this program. Approved PPE shall be utilized by all Monroe Municipal Utilities Authority employees engaged in operations during which the employee may be exposed to: hazardous processes, chemical hazards, environmental concerns, or mechanical irritants which are likely to cause injury or impairment to any part of the body through absorption, inhalation, or physical contact. These policies and procedures also apply to all management, supervisory, clerical and visitors overseeing such operations.

4.0 RESPONSIBILITIES

4.1 PROGRAM DIRECTOR

The Department Director or his/her designee oversees the operation of the PPE program and approves any revisions to this program and provides/arranges for worker training in implementation of these procedures.

4.2 DEPARTMENT SUPERVISORS

Department Supervisors are responsible for implementing this program with guidance from the Program Director and the Safety Training Coordinator. The Department Supervisor is also responsible for ensuring that personnel are using the proper PPE for their specific operation, and will supply PPE to personnel as necessary. Department Supervisors will conduct periodic inspections to ensure that PPE is being selected and used in accordance with this program.

4.3 MONROE MUA EMPLOYEES

MONROE MUA employees shall receive training prior to performing work involving the use of PPE. City personnel are expected to maintain and use their PPE in accordance with the training received.

4.4 CONTRACTORS

Any contractor conducting work at any MONROE MUA facility shall, at a minimum, be required to follow the procedures identified in this program when necessary. The Host Supervisor or designated authorized personnel should review and approve all subcontractor PPE prior to any work commencing.

5.0 PROCEDURES

The following procedures will provide guidelines in the selection, use, and maintenance of PPE. PPE is used to protect employees from health hazards when engineering or administrative controls are not feasible, or are ineffective in reducing exposures to acceptable levels.

5.1 SELECTION OF PERSONAL PROTECTIVE EQUIPMENT

The type of personal protective equipment selected shall be based upon potential hazards for a specific operation. Selection of appropriate PPE shall be approved by the Program Director or the Assistant Program Director. It will be the responsibility of Department Supervisors with guidance from the MONROE MUA Executive Safety Committee, as well as input from employees required to wear PPE, to select appropriate and adequate personal protective equipment for specific operations. Department Supervisors shall consult the Material Safety Data Sheets (MSDS) in order to determine the hazards associated with specific chemical(s) being handled/used and the recommended type of PPE.

In selecting the proper PPE, the following criteria shall be evaluated:

Hazards and Potential hazards of the job.
Route of exposure

- Immediately Dangerous to Life and Health (IDLH) atmosphere (e.g., oxygen deficient atmosphere, concentration of chemical that can cause acute exposure effects, etc.)
- The hazards associated with task being performed or products being used (e.g., toxic, flammable, corrosive, etc.)
- Exposure pathways (inhalation, ingestion, dermal contact)
- Expected exposure concentration(s)
- The physical hazards associated with the operation(s)
- Duration of work
- Worker training and fitting
- Equipment decontamination.

HUMAN FACTORS IN THE SELECTION OF PPE

Wearing PPE can place a worker at considerable risk. Workers may experience loss of dexterity, peripheral vision, or heat stress, all of which can burden the worker. Therefore, considerable thought must be given to the selection of PPE and operation processes. Wherever necessary, adequate rest breaks shall be arranged to provide relief for the worker.

HEAT STRESS

Wearing PPE can place a worker at significant risk of developing heat stress. This can result in health effects ranging from transient heat fatigue to more serious conditions. Heat stress is caused by several interacting factors: environmental conditions, clothing, workload, and the individual characteristics of the worker. Individuals vary in their susceptibility to heat stress. Factors that may predispose a certain person to heat stress include:

- Lack of physical fitness
- Lack of acclimatization
- Age
- Dehydration
- Obesity
- Alcohol and drug use
- Infection
- Sunburn
- Diarrhea (with associated dehydration)
- Chronic disease.

Reduced work tolerance and the increased risk of excessive heat stress are directly influenced by the amount and type of PPE worn. PPE adds weight and bulk, severely reduces the body's access to normal heat exchange mechanisms, and increases energy expenditure. Therefore, when selecting PPE, each item's benefit should be carefully evaluated in relation to its potential for increasing the risk of heat stress. Once PPE is selected, the safe duration of work/rest schedule should be determined based on the following:

- Anticipated work rate
- Ambient temperature and other environmental factors
- Type of protective clothing and other equipment utilized
- Individual worker characteristics and fitness
- Whether or not the worker has acclimatized to the hot conditions.

5.2 SELECTION OF HEAD PROTECTION MONROE MUA

Use of a safety hard hat is a basic requirement in ce1tain operations within the MONROE MUA.

For this purpose, all safety hard hats will meet American National Standard Institute (ANSI) 289.1 Standards. The shell of the hat must be made of a material hard enough to resist the blow and penetration from falling objects. A five-point suspension lining composed of headband and crown straps must be used to absorb the impact of the blow, and prevent contact between the shell and wearer's skull. Safety hard hats can also be used to protect against electric shock. In addition, the brim of the safety hard hat provides a level of protection for the eyes and forehead. Storage of materials or accessories under the hard hat is prohibited.

All employees will be given awareness training to achieve a proper fit including donning/doffing and adjusting the safety hard hat, as well as training in maintaining the safety hard hat, replacement of headband suspension, and identifying damage or wear which may reduce the structural integrity of the shell and/or require the replacement of the safety hard hat.

INSPECTION AND MAINTENANCE

Each employee required to wear a safety hard hat in the MONROEMUA shall be assigned an approved safety hard hat. It will be the responsibility of the individual to maintain his/her safety hard hat, and to notify the Supervisor when the safety hard hat or the suspension and headband need to be replaced.

All components of the safety hard hat shell, suspension, headbands, sweatbands, and any other accessories), will be visually checked daily for signs of dents, cracks, penetration, or any other damage that might reduce the degree of safety originally afforded. Safety hard hats subjected to significant impact will be replaced. The worker shall immediately notify the supervisor if damage is found and a replacement safety hard hat will be issued.

The safety hard hat shall be stored in the bag or locker assigned to each worker, in a location away from extreme temperatures, sunlight, and the possibility of accidental damage. As some paints and thinners can damage the shell and reduce protection by physically weakening it or negating electrical resistance, safety hard hats should be washed in hot water using a good detergent. The shell will be scrubbed and rinsed in clear hot water. After rinsing, the shell will be carefully inspected for signs of damage.

Visitors will be issued a temporary safety hard hat during any visit to a MONROE MUA location where the risk of head injury exists.

Caution

Safety hard hats are prohibited from being worn backwards by any MONROE MUA employees unless specifically allowed by the hat manufacturer.

The eye and forehead protection afforded by the design of the safety hard hat is negated when the safety hard hat is worn backwards and, unless specifically allowed by the manufacturer, does not offer the same impact resistance when reversed.

5.3 SELECTION OF EYE AND FACE PROTECTION

OSHA requires the use of eye and face protective equipment where there is a reasonable probability of preventing an injury when such equipment is used. The MONROE MUA will provide the type of protection suitable for work to be performed, and employees shall be required to use such protectors for MONROE MUA operations. Use of eye protection (safety glasses) is required in the town and outdoor grounds by all supervisory, management, visitor and worker personnel, and contractors. Safety glasses must meet ANSI Z87.1-yyyy Standards.

Suitable eye protection will be provided to all workers, supervisory, management and visitors conducting operations where eye protection is required. All personnel working and/or passing through operations where eye protection is required shall use eye protection. Certain operations may require the use of a face shield in addition to eye protection. Face shields will be provided by the MONROE MUA and shall be used by the worker(s) when required by the nature of the operation. Note that face shields are designed to protect the face not the eyes and therefore must be worn in addition to, and not in place of, eye protection.

Personnel whose vision requires the use of connective lenses, and who are required to wear eye protection, will wear either safety glasses designed to fit over prescription lenses or safety goggles. Workers may obtain prescription safety glasses with side shields, but these will not be provided by the MONROE MUA.

Additionally, eyewashes and emergency showers shall be strategically placed in all hazardous locations, and shall be easily accessible and remain unobstructed at all times.

INSPECTION AND MAINTENANCE

All MONROE MUA employees engaged in operations shall properly store their safety glasses/goggles. Face shields shall be provided to those workers involved in operations that require their use. Each individual will be responsible for the maintenance of his/her protective eye equipment. Requests for replacement of damaged glasses shall be made to the respective Supervisor. Visitors will be issued temporary safety glasses during any visit where eye protection is required.

It is essential to keep the lenses of protective eyewear clean. The employee shall conduct a daily inspection and cleaning of the eye protection with soap and hot water, or with cleaning solution and tissue. Cleaning stations will be provided at selected locations.

Pitted and scratched lenses should be replaced promptly. Anyone experiencing problems with protective eyewear should bring it to the attention of their Supervisor, who will provide replacement eyewear.

A general guideline for the selection of proper eye protection follows:

APPROPRIATE EYE WEAR

HAZARD	ACCEPTABLE EYE WEAR
Spray or application of corrosive or irritant chemicals	• Chemically Resistant Goggles, • Splash Proof Hooded Ventilation • Plastic Face Shield for Severe Exposure (used in conjunction with goggles, only)
Operations producing dust or flying particles	• Safety Glasses, • Plastic Face Shield for Severe Exposure (used in conjunction with safety glasses, only)
Operations involving pressurized fluids	• Chemically Resistant Goggles • Plastic Face Shield for Severe Exposure (used in conjunction with goggles, only)
Other activities that are potentially hazardous to the eye	Consult the Assistant Superintendent of Health & Safety for guidance

5.4 SELECTION OF PROTECTIVE CLOTHING

The MONROE MUA will provide protective clothing for employees who may be exposed to skin or body related hazards.

Certain MONROE MUA operations have a potential exposure to hazardous chemicals. The personal protective clothing selected shall provide adequate protection against the hazards of the operation for which the clothing is to be used. Among operations which may require use of protective clothing are working with pesticides, trash sorting, and handling of hazardous chemicals. Protective clothing may be used during operations with potential nuisance dust, and as a general hygiene issue (mechanics preventing contact with grease).

Chemical protective clothing is available in a variety of materials which offer a range of protection against various chemicals. The appropriate clothing material will depend on:

- The chemicals or hazards in the operation
- The physical state of the hazard (solid, liquid, gas)
- Protection properties of the PPE material
- Ability to allow completion of the required task.

Criteria for Selection

Protective clothing for MONROE MUA'S operations shall be selected in such a manner that materials selected offer the widest range of protection against the chemicals used, and/or are likely to be encountered for the various operations.

Employees are at risk for heat related injuries due to the heat retention proprieties inherent in protective clothing. Protective clothing limits the ability of the employees' body to regulate heat through evaporative cooling. All protective clothing shall be evaluated for heat transfer characteristics prior to selection. Wherever clo value is provided, given other protective prope1ties are equivalent, clothing with the lowest clo value should be selected in hot environments or for high work rates. (The "clo" or thermal insulation value is a measure of the capacity of the chemical protective clothing to dissipate heat loss through means other than evaporation. The larger the clo value, the greater the insulating properties of the garment and, consequently, the lower the heat transfer.)

A basic selection criterion for protective clothing is provided below:

HAZARD	PROTECTIVE CLOTHING
Low light or heavily traffic areas	High visibility vests
Dry or wet, no dermal or respiratory hazard	Work clothes or coveralls, Rain gear
Dry dust, minimal dermal	Cotton or Tyvek™ type coveralls
Dry or moist low dermal	Cotton and coated Tyvek™ coveralls
Wet materials, mists or fumes, high dermal	Cotton coveralls and laminated coated Tyvek™ or appropriate polymer rain suit or coverall
Arc Flash or Blast Exposure	Arc rated equipment appropriate to the Hazard Class

Heat transfer characteristics of the materials shall also be evaluated in selecting the proper chemical protective clothing. As most chemical clothing is virtually impermeable to moisture, evaporative cooling is limited. Wherever clo values are provided, given other protective prope1ties are equivalent, clothing with the lowest clo value should be selected in hot environments or for high work rates.

The MONROE MUA shall provide employees with the necessary protective equipment adequate for the operations to be conducted. All employees shall change into their street clothes after washing at the end of the day prior to leaving. Contaminated PPE shall be disposed of in designated containers placed at assigned areas. No person shall be allowed to wear contaminated clothing outside the work area.

5.5 SELECTION OF FOOT AND LEG PROTECTION

In order to protect MONROE MUA employees' feet against falling, rolling or sharp objects, workers shall wear safety footwear. Safety footwear shall meet the requirements of current ANSI Z41.1-yyyy Standards for both compression and impact tests. Workers shall be required to change into their respective safety shoes prior to beginning daily work activities.

Additional foot and leg protection shall be provided by the MONROE MUA as necessary for specific operations. The Depa1iment Supervisor shall evaluate each operation and determine the need for additional protection. The selection process for foot and leg protection shall be within the same guidelines provided for the selection of personal protective clothing above. Department Supervisors shall then be responsible for implementation of the use of any such equipment.

A basic guide for choosing foot and leg protection is presented below. However, material data sheets, and other relevant information such as the type of job task, manufacturers' and American Conference of Governmental Industrial Hygienists (ACGIH) guidelines should be consulted for specific operations.

HAZARD	PROTECTIVE FOOTWEAR
Physical hazard	Steel-toed shoes and/or steel shanks
Physical and minor chemical hazard	Steel-toed chemical protective boots or steel-toed boots with chemical protective boot covers or over boots
Physical and severe chemical hazard	Steel-toed boots with chemical protective boot covers or over boots, taped to protective clothing

5.6 SELECTION OF HEARING PROTECTION

Exposure to high noise levels can cause hearing loss or impai1ment. It can cause physical and psychological stress. There is no cure for noise-induced hearing loss, so the prevention of excessive noise exposure is the only way to avoid hearing damage.

Earplugs fit in the ear canal. There are many different styles of earplugs, so the manufacturer's specific directions for earplug insertion should always be followed. Employees should always clean their hands before inserting earplugs to prevent dirt and debris from entering the ear canal.

Earmuffs fit over the whole ear to seal out noise, so the cups on the earmuffs must form a good seal around the ear. Earmuffs with cracked, cut, or missing gaskets reduce the protection afforded. Facial hair, earrings, and eyeglasses also decrease the protection by breaking the seal around them. To ensure the proper degree of protection, earplugs and earmuffs may have to be used together for certain operations. This is especially true in extremely noisy work environments.

The MONROE MUA will provide all employees who work in specific areas (where noise levels exceed an average of 85 dBA over an eight hour period. A separate hearing conservation program will be required for affected employees.

5.7 BACK PROTECTION

Improper lifting of moderate to heavy objects can injure the back. Lifting improperly is the largest single cause of back injury. Everyone can prevent back strain by knowing and using proper lifting techniques. It is imp011ant to note that back braces are not considered PPE, and may present a false sense of security by causing the worker to believe they can pick up larger or heavier loads.

The following guidelines will assist MONROE MUA in employees understanding the proper ways to lift and ways one can prevent the pain and misery of a sprained back:

1. **Size up the load before trying to lift it.** Test the weight by lifting one of the comers. If the load is too heavy, or of an awkward shape, the best thing to do is get help from a fellow employee, or if possible, use a mechanical lifting device. Never lift objects heavier than 50 lbs. unassisted.
2. **Bend the knees.** This is the single most important rule when lifting any object. When lifting an object, crate, or box, the feet should be placed close to the object. Center yourself over the load, then bend the knees and get a good handhold. Lift straight up, smoothly. Allow the legs, **not** the back, to do the work.
3. **Do not twist or turn your body while lifting.** Keep the load close to the body, and keep it steady. Sudden twisting or turning could result in a back injury.
4. **Make sure the load can be carried to its destination.** Also make certain the path is clear of obstacles, and there are no hazards such as spilled grease or oil.
5. **Set the load down properly.** It is just as important setting the load down as in lifting it. Lower the load slowly by bending the knees, letting the legs do the work. Don't let go of the load until it is secure on the floor.

6. **Repetitive motion jobs.** Alternate one foot on a small stool or other object if standing for prolonged periods. Stand straight and keep your head aligned with your back and hips. Shift positions or walk around frequently. Turn your body as a unit.

Back Belts

Back belts are not recognized by OSHA as effective PPE to prevent back injury. OSHA does not endorse, nor forbid the use of back belts or similar devices for back injury prevention. The MONROE MUA policy is not to supply back belts for personal protection.

5.8 SELECTION OF HAND/ARM PROTECTION

Hand protection will consist of protective gloves or glove systems which provide protection against hazards including: severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and heat and cold hazards. MONROE MUA will base the selection of hand protection on the hazards present. Adequate protective material, which may include a combination of different types of protection, will be provided to protect against the most hazardous situation for the specific operation.

Chemical resistant gloves must be selected based on the type of chemical exposure. In the presence of multiple chemicals, the safety officer will select the appropriate chemical protection based on the manufacturer's suggested breakthrough time. The MONROE MUA may require that a combination of multiple gloves be used to provide sufficient protection. The MONROE MUA shall supply the appropriate hand protection for specific operations. The Safety Coordinator, in conjunction with the Safety Committee, shall evaluate each operation and determine the need for additional protection. Department Supervisors shall then be responsible for implementation of hand protection.

Use the reference guide presented below for selecting appropriate hand protection. Material safety data sheets (MSDS), and other relevant information, such as the type of operation, manufacturers' guidelines, and American Conference of Governmental Industrial Hygienists (ACGIH) guidelines should be consulted for specific operations.

The following is a chart showing general guidelines for proper glove selection based on the hazard.

GENERAL GUIDELINES FOR GLOVE SELECTION		
Hazard	**Degree of Hazard**	**Protective Material**
Abrns;o,	Severe	Reinforced heavy rubber, staple-reinforced heavy leather
	Less Severe	Rubber, plastic, leather, polyester, nylon, cotton
Sharp edges	Severe	Metal mesh, staple-reinforced heavy leather, Kevlar TM, AramidTM fiber, Steel mesh
	Less Severe	Leather, terry cloth, Aramid™ fiber
	Mild with delicate work	Lightweight leather, polyester, nylon, cotton
Chemicals and fluids	Risk varies according to the chemical, its concentration, and time of contact among other factors. Refer to the manufacturer or product MSDS.	**Dependant on chemical.** Examples include: Natural rubber. neoprene, nitrile rubber, butyl rubber, PTFE (polytetratluoroethylene), TeflonTM, Yiton™, polyvinyl chloride, polyvinyl alcohol, SaranexTM, 4H™, BarricadeTM, ChemrerrM, Responder™, TrellchemTM
Cold	Cryogenic sources	Leather, insulated plastic or rubber, wool, cotton
Electricity	Shock, Burns & Electrocution	Rubber-insulated gloves tested to appropriate voltage (CSA Standard Z259.4-M 1979) with leather outerglove
Heat	High temperatures (over 350 deg C)	Asbestos, ZetexTM
	Medium high (up to 350 deg C)	NomexTM, KevlarTM, neoprene-coated asbestos, heat-resistant leather with linings
	Warm (up to 200 deg C)	NomexTM, Kevlar™, heat-resistant leather, terry cloth, Aramid™ fiber
	Less warm (up to 100 deg C)	Chrome-tanned leather, terry cloth
General duty	Cuts & Abrasions	Cotton, terry cloth, leather
Product contamination	Electronics	Thin-film plastic, lightweight leather, cotton, polyester, nylon

Metal mesh or leather gloves may be required to protect against abrasions when handling sharp or rough objects. The MSDS should be consulted to determine the correct protective glove material for each chemical or product.

5.9 RESPIRATORY PROTECTION

Inhalation is the quickest and most common route of exposure to hazardous materials. The respiratory tract can be affected by:

- Dusts
- Fumes
- Vapors
- Mists and sprays
- Gases
- Smoke, and
- Biological hazards.

Once these materials enter the lungs, they can damage and/or cross the cell membrane into the blood system, and affect other parts of the body. Because of the specialized nature of respiratory protection, this will be covered under a separate document: Respiratory Protection Plan.

5.10 SPECIAL SITUATIONS

MONROE MUA adds tasks that they perform requiring special or additional PPE.

6.0 TRAINING

MONROE MUA employees requiring the use of PPE shall be trained in the type of PPE needed for the various tasks assigned, the proper use of the PPE, and maintenance of the equipment. This training shall be provided initially at the time of hire and then annually thereafter. It is the responsibility of every MONROE MUA employee to properly wear, maintain, care for, and store their PPE. Additionally, it is important to remember that PPE must be used correctly in order to be effective. Training shall include the following:

- Hazard identification including symptoms of overexposure.
- Use of engineering controls to minimize exposure, an explanation of why engineering controls may not always be adequate to totally eliminate the hazard, and when PPE is required to supplement protection.
- A description of the type of PPE chosen and the protection provided to the employee.
- A thorough demonstration of the selected method of personal protective equipment to include use, troubleshooting and maintenance followed by hands-on training of the employee
- A description of storage and maintenance facilities for maintaining PPE. PPE must be maintained properly in order to provide the proper amount of protection afforded by the equipment. It is important to properly clean and sanitize the PPE. Earplugs, for instance may keep the ears safe from damage against noise, but may cause an infection if inserted by dirty hands. Equally important is how to care for and store the equipment. For example, if respirators are stored near heaters or excessive warm places, the rubber face piece material can become distorted. If equipment is damaged, then one must properly repair the equipment or replace it promptly. When working with chemicals, if suits, boots, gloves are punctured, do not repair them. In this case, replace the equipment and dispose of the damaged equipment properly

7.0 ABILITY TO DECONTAMINATE

If disposable PPE cannot be used, then the ability to decontaminate the PPE needs to be taken into consideration. Once the material absorbs a chemical, it must be cleaned thoroughly before it can be reused. If the chemical has completely permeated the material, it is unlikely that the protective equipment can be adequately decontaminated.

8.0 JOB HAZARD ANALYSIS

The most important factor concerning the selection of PPE is identifying the hazards present and the proper characterization of the hazards. Hazards include chemical, physical, and biological as well as radiological hazards. Once the type of hazard has been identified then consideration should be given to the hazard encountered.

For chemical hazards it is important to identify the chemicals being used. Protective garments are made of a variety of materials for protection against exposure to specific chemicals. It is important to remember that there is no universal protective material. All materials will decompose, be permeated, or otherwise fail to protect under given circumstances and hence the manufacturer's guides should be reviewed prior to selecting PPE.

For most MONROE MUA operations, chemicals usually occur in mixed combinations and the protective clothing materials are not in continuous contact with the chemicals for prolonged periods of time. Therefore, the PPE selected may be adequate for the specific operation, yet not be the "best" protective material. Selection of the most suitable PPE is usually based upon the most hazardous chemicals, potential for exposure hazards, and concentrations expected to be encountered. Sometimes layering affords the best protection.

The concentration of chemicals to which a worker may be exposed needs to be considered when selecting PPE. Airborne levels of chemicals should be compared to Occupational Safety and Health Administration (OSHA) pe1missible exposure limits (PEL) and ACGIH threshold limit values (TLV). It is important to remember these standards are not established for skin directly exposed to liquid. So whereas the airborne level for a particular chemical may be low and may not cause a respiratory hazard, the liquid coming into direct contact with the skin may cause an overexposure.

The physical state of a chemical affects the potential of the chemical to permeate the protective clothing as well. A chemical vapor has a limited or dispersed concentration and is less likely to permeate protective gloves or coveralls. On the other hand direct contact with liquids increases the rate of permeation and degradation of the protective material.

Similarly, hazard assessments must also be conducted for physical hazards such as for falling objects, excessive noise, extreme temperature conditions, moving equipment parts, etc. Physical hazards also must be controlled either through the use of engineering controls or PPE, or both as the case may be.

Job hazard analysis shall be conducted for each operation in MONROE MUA. All job hazard analysis shall be documented and signed and dated by the Program Director.

9.0 LIMITATIONS OF PERSONAL PROTECTIVE EQUIPMENT

PPE is a secondary means of control. No one type of PPE protects workers from all the hazards that may be present at the workplace. It is important to use PPE properly or else it will be

ineffective. Additionally, if the integrity of the PPE is compromised then the worker is exposed to the full extent of the hazard present in the workplace.

It is always important to understand the limitations of the PPE being used. Prior to using any type of PPE the equipment should be inspected thoroughly.

10.0 PROGRAM EVALUATION

This program shall be evaluated periodically to ensure its proper implementation. The Supervisors shall be responsible for conducting periodic inspections (at least annually) to document the proper selection, use, and care of PPE. All findings shall be documented along with any corrective actions implemented. Results of the evaluation shall be used to modify/update this program as necessary.

APPENDIX A - TASK HAZARD ANALYSES

JOB CATEGORIES: SUPERVISORS

HAZARDS:

The hazards while involved in MONROE MUA operations are identical for Supervisory personnel as they are for the remaining personnel involved in their respective operation.

PERSONAL PROTECTIVE EQUIPMENT:

Supervisory personnel shall use the same type of PPE specified for center personnel when engaged in similar operations as the respective MONROE MUA personnel.

OTHER CONTROL MEASURES:

Supervisory personnel shall also follow the respective Other Control Measures specified for the respective MONROE MUA personnel when engaged in center operations.

JOB/TASK CATEGORY: BUILDING MAINTENANCE WORKER

Examples of Work:

Cleans rooms, offices, cafeterias, cottages, other living quarters, halls, gymnasiums, laboratories, auditoriums, hospital wards, bathrooms, and restrooms.

Dusts, cleans, and polishes furniture, fixtures, woodwork, and equipment.

Washes and cleans windows, sweeps, washes, strips, waxes, and polishes floors, and sweeps and vacuums rugs.

May make minor repairs to the heating, electrical, and other systems of varied types of buildings, and services bathrooms/restrooms.

Assists carpenters, electricians, painters, plumbers, and steamfitters by carrying tools and materials, by placing and removing ladders, by cleaning up after work has been done, and by doing other varied tasks of a simple nature.

Services coin machines and empties ashtrays and wastebaskets.

May make beds and change household linens.

May collect, count, and sort laundry.

Distributes supplies.

Keeps essential records and files.

In the Department of Human Services, may be required to undergo fire-training classes.

When necessary, moves and controls heavy equipment, carries and sets up ladders and scaffolding, and works from ladders and scaffolds.

When assigned, moves object weighing about 50 pounds.

Mops or scrapes sticky or heavy liquids from floors.

Occasionally works on ladders and scaffolds to change light bulbs, replace venetian blinds, wash walls, and so fo1th.

When assigned, moves heavy furniture, supplies, and equipment.

Runs power-cleaning equipment, cleans, and oils the equipment, and changes brushes and accessories.

May mow lawns, trim hedges, rake and burn leaves and refuse, trim driveway and sidewalk edges using spades and hoes, shovel snow, and spread sand or salt on icy surfaces to prevent slipping.

Will be required to learn to utilize various types of electronic and/or manual recording and information systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	▪ Safety Toe Boots ▪ Seasonal Environmental Conditions Training
Exposure to contact with Chemicals	▪ Hazard Communication Training ▪ Personal Protective Equipment Training ▪ Chemical Resistant Gloves ▪ Safety Glasses (solid lubricants) ▪ Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	▪ Fall Protection Training ▪ Fall Protection Equipment
Exposure to Electrical Shock	▪ Lockout/ Tagout Training ▪ Shock Resistant Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment.	▪ High Visibility Safety Vest ▪ Flagger/Work zone Safety Training ▪ Safety Toe Boots ▪ Site Safety Awareness Training
Exposure to Overhead Hazards	▪ Hard Hat
Injury from Lifting Heavy Objects	▪ Back Safety Training
Ergonomic Injuries to Back and Arms	▪ Tools with Ergonomic Grips ▪ Training in Safe Work Procedures
Exposure to Impact Noise	▪ Hearing Conservation Training ▪ Ear Plugs/Earmuffs
Injuries due to Forklift Operations	▪ Powered Industrial Lift Truck Training ▪ Seat Belts

HAZARDS	CONTROL MEASURES
Exposure to Heat/Cold Stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	• Seat Belts • Driver Awareness Training
Response to Incipient Fires	• Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	• Lockout/Tagout Training • Work Site Safety Procedures
Exposure to blood borne pathogens	• Blood Borne Pathogens Training • Gloves • Face masks • Gmrnles

JOB/TASK CATEGORY: EQUIPMENT OPERATOR

Examples of Work:

Operates equipment such as front-end loaders and bulldozers to pull, pile, move, turn, lift, and load sand, gravel, leaves and refuse at various work sites on flat or rolling terrain.

Operates equipment towed by a tractor such as a gang mower, and mows grass, and/or hauls or digs di11 with scrapers or pans.

Clears brush, stumps, and rocks on flat and rolling terrain or levels earth to rough specification at construction sites with simple terrain problems.

Excavates trenches and drainage ditches for culverts or streams, and utilizes manipulative control equipment to adjust attachments.

Smooth's surfaces, repairs small bump, and fill holes.

Operates truck-mounted hydraulic crane to lift/dump container into truck body.

Ensures that equipment is ready for operation at all times by inspecting/lubricating moving paits, inspecting tires for proper inflation, checking brake hydraulic reservoir level and oil level, and conducting a general inspection of equipment for obvious deficiencies.

Reads instructions and operation manuals to learn correct lubrication, adjustment, and repair procedures for assigned equipment.

Performs a variety of manual unskilled laboring tasks and work assignments when not engaged in operation of equipment.

May occasionally drive a truck.

Reports any problems that cause a delay in completion of work assignment to the supervisor, either in writing or verbally.

Receives assignments either in writing or orally explaining work to be done and equipment to be used to know the specifics of the assigned tasks.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training
Exposure to Contact with Chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	• Fall Protection Training • Fall Protection Equipment
Exposure to Electrical Shock	• Lockout/ Tagout Training • Shock Resistant Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	• High Visibility Safety Vests • Flagger/Workzone Safety Training • Safety Toe Boots • Site Safety Awareness Training
Exposure to Overhead Hazards	• Hard Hat
Injury from Lifting Heavy Objects	• Back Safety Training
Ergonomic Injuries to Back and Arms	• Tools with Ergonomic Grips • Training in Safe Work Procedures
Exposure to Impact Noise	• Hearing Conservation Training • Ear Plugs/ Earmuffs
Injuries due to Forklift Operations	• Powered Industrial Lift Truck Training • Seat Belts
Exposure to Heat/Cold Stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	• Seat Belts • Driver Awareness Training
Response to Incipient Fires	• Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	• Lockout/ Tagout Training • Work Site Safety Procedures

JOB/TASK CATEGORY: LABORER

Examples of Work:

Loads, lifts, and moves supplies, furniture, and equipment.

Digs trenches and does manual grading.

Cleans incinerators.

Collects rubbish and other refuse.

Cuts grass.

Trims hedges.

Waters lawns, flowers, and vegetable beds.

Loads and unloads trucks.

Shovels snow.

Whitewashes walls.

Shovels gravel and sand.

Mixes cement and mortar.

Places forms used in concrete work.

Performs cold patching.

Cleans up underbrush, foliage, vines, and weeds.

Cuts down trees.

Digs out stumps of trees, and digs out and destroys poisonous vines, weeds, and undergrowth.

Learns to operate construction and/or maintenance equipment.

May learn to operate a pneumatic drill.

May learn to operate and make minor repairs to street, road, and related public works equipment.

May rake asphalt mixtures used in paving to proper thickness and grade.

May distribute asphalt mixtures to eliminate hollows and high spots in the surface under the construction or repair.

May patch joints and edges of pavement with asphalt cement.

May tamp and smooth asphalt pavement.

May operate and maintain asphalt-heating kettle.

May assist in the repair and maintenance of zoo displays and structures.

May perform the routine work involved in painting of interior and exterior zoo displays.

May handle, when required, animals as necessary in performing routine maintenance and repair of zoo displays and structures.

Cleans sludge beds.

Sweeps streets and sidewalks.

Cleans sewers.

Pries and hammers apart sections of wall and roof.

Loads debris into truck for removal.

Sorts, piles, and cleans salvageable brick, stone, lumber, and metalwork.

Under direction, may learn to make routine repairs to valves, fittings, pipe sections or other equipment used in the area of assignment.

Occasionally drives trucks.

Will be required to learn to utilize various types of electronic and/or manual recording and info1mation systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training

HAZARDS	CONTROL MEASURES
Exposure to contact with Chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	▪ Fall Protection Training • Fall Protection Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	• High Visibility Safety Vests • Flagger/Workzone Safety Training • Safety Toe Boots • Site Safety Awareness Training
Exposure to Overhead Hazards	• Hard Hat
Injury from Lifting Heavy Objects	• Back Safety Training
Ergonomic Injuries to Back and Arms	• Tools with Ergonomic Grips • Training in Safe Work Procedures
Exposure to Impact Noise	• Hearing Conservation Training • Ear Plugs/ Earmuffs
Exposure to Heat/Cold Stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	• Seat Belts • Driver Awareness Training
Response to Incipient Fires	• Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	• Lockout/ Tagout Training • Work Site Safety Procedures
Exposure to blood borne pathogens	• Blood Borne Pathogens Training • Gloves • Face masks • Goggles

JOB/TASK CATEGORY: MAINTENANCE & REPAIR

Examples of Work:

Erects simple forms, mixes cement and aggregates, pours same, and does the finishing work involved in concrete structures.

Patches and repairs brick and concrete structures.

Repairs damaged plastered walls and ceilings.

Spackles, and paints interior and exterior metal, wood, and masonry surfaces.

Repairs plumbing stoppages and repairs leaks in copper, soil, and iron pipe.

Replaces washers and gaskets, and makes general service repairs.

Does general sheet metal work involved in repairing roofs, drain boards, and rainspouts.

Replaces light bulbs, fuses, wall plates, fixture cords, and switches.

Replaces broken glass and re-puttying frames

Changes lubricants, refuels, and does light maintenance work on equipment and vehicles.

Cleans tools and equipment.

Keeps simple records.

Will be required to learn to utilize various types of electronic and/or manual recording and computerized information systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training
Exposure to contact with Chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	• Fall Protection Training • Fall Protection Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	• High Visibility Safety Vests • Flagger/Work zone Safety Training • Safety Toe Boots • Site Safety Awareness Training
Exposure to Overhead Hazards	• Hard Hat
Injury from Lifting Heavy Objects	• Back Safety Training
Ergonomic Injuries to Back and Arms	• Tools with Ergonomic Grips • Training in Safe Work Procedures
Exposure to Impact Noise	• Hearing Conservation Training • Ear Plugs/ Earmuffs
Exposure to Heat/Cold Stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	• Seat Belts • Driver Awareness Training
Response to Incipient Fires	• Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	• Lockout/ Tagout Training • Work Site Safety Procedures

JOB/TASK CATEGORY: MUNICIPAL RECYCLING COORDINATOR

Examples of Work:

Plans, coordinates, and develops the recycling program for a jurisdiction for the efficient disposal of recyclable material such as metal cans, glass bottles, used oil, paper products, and so forth.

Develops and implements plans for promoting the recycling program.

Writes and distributes educational material, press releases, and other informational materials to promote the recycling program and encourage participation of residents in the program.

Writes the jurisdiction's recycling proposals, applications for grants, and prepares drafts of recycling contracts.

Consults with concerned officials for the purpose of expanding and improving the recycling program and its efficiency.

Coordinates recycling program activities with the collection of other solid waste materials, whether by private contractor or by the municipality.

Oversees the work performed onsite by contractors or public employees.

Inspects general quality of work and/or compliance with contractual agreement and/or adherence to specifications.

Contacts vendors and contractors to request information on the prices of materials and/or services to develop cost projections of recovering recyclable materials.

Prepares correspondence to contractors, cooperating agencies, and town officials to provide information and answer inquiries regarding the recycling program.

Recommends where disposal units for recyclable materials should be placed within the jurisdiction based on greatest impact of accessibility by citizens.

May negotiate recycling contracts with private firms to provide the greatest revenue return for the recyclable material.

Recommends the purchase of equipment such as crushing machines so as to reduce the bulk of the transpo1ted product to the contracted recycling firm.

Determines to what extent material needs to be segregated, identified, and handled to prepare it for disposal.

Determines type of equipment and personnel needed to accomplish the segregation, identification, and handling of material. Arranges for space, equipment, and personnel to carry out the disposal activities in an efficient, economical, and proper manner.

Evaluates the adequacy and appropriateness of policies and procedures guiding the program.

Periodically conducts specific market analysis to determine how materials will be most effectively reclaimed for recycling at the greatest overall benefit to the municipality.

Analyzes handling procedures to determine need for improving or changing approach or technique.

Ensures the cleanliness of the recyclable disposable locations.

Develops and maintains harmonious relations with government, professional and civic groups, and industry personnel.

Speaks before various groups to apprise them of the purpose and goals of the recycling program and to elicit their support.

Prepares cost estimates on the cost and revenue acquired from this program.

Establishes and maintains essential records and files.

Will be required to learn to utilize various types of electronic and/or manual recording and information systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Body Posture And Possible Stress Factors.	▪ Articulating Keyboard And Mouse Tray ▪ Ergonomic Awareness Training
Chemicals In The Work Place	• Hazard Communication Training

JOB/TASK CATEGORY: ROAD REPAIR

Examples of Work:

Supervises lower level repairers performing the following duties:

Maintains and repairs roads.

Installs and maintains traffic lines and traffic signs.

Maintains grounds.

Patches roads with oil and stone or cold patch.

Cleans and repairs side drains, catch basins, and drainpipes.

Cuts brush and trees.

Unloads and stores salt.

Erects posts.

Installs drain pipes and catch basins.

Lays walls.

Paints guardrails.

Constructs road drainage systems and all types of curbing adjacent to roads.

Grades, constructs, widen, seals, coats, and paves roads.

Plows snow, sands and salts roads, and unloads and stores salt.

Operates snowplows and road equipment.

Directs subordinates in sweeping streets and shoveling the accumulations into containers or onto trucks.

Loads, unloads, and applies sand and street repair materials.

Repairs curbs.
Cleans water catch basins.

Helps prepare work schedules to accomplish required tasks.

Supervises work operations and/or functional programs, and has responsibility for employee evaluations and for effectively recommending the hiring, firing, promoting, demoting, and/or disciplining of employees.

Ensures that the crew takes safety precautions and that proper procedures are taken to protect the public from injury.

Inspects and checks completed work to ensure proper road repair and maintenance procedures are followed.

May operate, check, service, and make minor repairs to trucks and other road maintenance and construction equipment.

May aid in executing plans for effective utilization of personnel, equipment, materials, and supplies.

May supervise employees engaged in the work involved in the construction, maintenance, and repair of roads, drains, catch basins, culve11s, and related structures.

May make investigations of complaints and takes proper action to see that needed repairs are made with a minimum delay.

May supervise work involved in the construction of various types of drainage systems, manholes, new guardrails, and all types of curbing.

May supervise work involved in making repairs to road pavements, and minor and major restoration of disintegrated portions of concrete, bituminous concrete, sheet asphalt, and other types of pavement.

May supervise work involved in making repairs to and reconstruction of paved and unpaved road shoulders, and maintenance and clearing of rights of way including maintenance of grass areas.

May supervise work involved in repairing and rebuilding guardrails, fences, and walls and the painting thereof.

May supervise work involved in the removal of snow and sanding and salting of icy roads.

May supervise employees engaged in the mixing and laying of varied types of bituminous paving mixtures.

May supervise work involved in locating and installing curbs.

May set up construction quality and work performance standards.

May assist in setting up priority lists for street repair program planning.

May assist in planning the street repair program for the calendar year.
May set up work, staffing, and equipment schedules.

Enforces safety procedures.

May assist in coordinating contracts administered under the street repair program.

May assist in directing the grading of streets, location, and installation of curbs, and construction of driveways.

Maintains related records and files.

Will be required to learn to utilize various types of electronic and/or manual recording and info1mation systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training
Exposure to contact with Chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	• Fall Protection Training • Fall Protection Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	• High Visibility Safety Vests • Flagger/Work zone Safety Training • Safety Toe Boots • Site Safety Awareness Training
Exposure to Overhead Hazards	• Hard Hat
Injury from Lifting Heavy Objects	• Back Safety Training
Ergonomic Injuries to Back and Arms	• Tools with Ergonomic Grips • Training in Safe Work Procedures

HAZARDS	CONTROL MEASURES
Exposure to Impact Noise	▪ Hearing Conservation Training ▪ Ear Plugs/ Earmuffs
Exposure to Heat/Cold Stress	▪ Cold weather clothing ▪ Gloves ▪ Hats ▪ Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	▪ Seat Belts ▪ Driver Awareness Training
Response to Incipient Fires	▪ Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	▪ Site Safety Awareness Training ▪ Personal Protective Equipment Training ▪ Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	▪ Lockout/ Tagout Training ▪ Work Site Safety Procedures

JOB/TASK CATEGORY: MECHANIC

Examples of Work:

Distributes and balances the workload among employees according to established workflow or job specialization.

Observes the status and progress of the work and makes adjustments according to established priorities.

Answers questions of other workers regarding procedures, policies, regulations, and instructions.

Instructs them in specific tasks and job techniques.

Answers questions of the supervisor regarding overall work operations and problems.

Obtains descriptions of mechanical problems from drivers of vehicles and/or test drives the vehicle or uses testing equipment such as motor analyzers, spark plug testers, or compression gauges to locate and identify the problem.

Locates worn, dirty, or poorly adjusted parts through visual check of vehicle or through the use of testing devices such as timing lights and dwell meters or other diagnostic equipment.

Removes, cleans, or replaces defective parts such as spark plugs, wheel cylinders, mufflers, tail pipes, or brake shoes.

Makes settings and adjustments such as setting distributor and voltage regulators, points, gapping spark plugs, setting engine idle and timing, and adjusting brakes.

Removes units such as engine, transmission, or differential using wrenches and hoist.

Disassembles unit and inspect parts for wear using micrometers, calipers, and thickness gauges.

Repairs or replace parts such as pistons, rods, gears, valves, and bearings using hand tools.

Overhauls or replaces carburetors, blowers, generators, distributors, starters, and pumps.

Rebuilds parts such as crankshafts and cylinder blocks using lathes, shapers, drill presses, and welding equipment.

Rewires ignition system, lights, and instrument panel.

Relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, and solders leaks in radiator.

Mends damaged body and fenders by hammering out or filling in dents and welding broken parts.

Replaces and adjusts headlights and installs and repairs accessories such as radios, heaters, mirrors, and windshield wipers.

Disassembles and rebuilds components by fitting and installing parts such as rings, pistons, bearings, and gears.

Aligns, meshes, and connects repaired units to related mechanisms and makes adjustments to ensure proper operation of units.

Adjusts ignition timing and valves and adjusts or replaces spark plugs and other pmts to ensure efficient engine performance.

Installs air conditioners and service components such as compressors and condensers.

Aligns and balances wheels and repairs steering and suspension systems.

Adjusts brakes, replaces brake linings and pads, repair hydraulic cylinders, and makes other repairs to the brake system.

Cleans radiators, locates and solders leaks, and installs new radiator cores in vehicles.

Overhauls and repairs electrical systems and components.

Replaces defective wiring and electrical units in vehicles such as starters and generators.

Repairs and replaces gear trains, couplings, hydraulic pumps, and other components of automatic transmission systems.

In making repairs, uses a variety of tools, equipment, and testing devices such as pneumatic wrenches to remove bolts; lathes and grinding machines to rebuild brakes and other parts; welding and flame cutting equipment to repair exhaust systems; ammeters, ohmmeters, and voltmeters to locate electrical system malfunction; motor analyzers, spark plug testers, or compression gauges to locate mechanical problems; wheel balancing equipment to balance wheels; scientific testing equipment to help adjust and locate malfunctions in fuel, ignition, and emission control systems; and common hand tools such as screwdrivers, pliers, and wrenches to work on small parts and access hard-to-reach places.

Consults manufacturer or other manuals or charts to identify replacement parts or ascertain specified dimensions and tolerances of components.

Drives a vehicle such as a pick-up truck, tow truck, and so forth to various locations to service disabled motor vehicles.

Examines and discusses with operator the nature of the malfunctions, manipulates gears, examines battery, checks fan belt, raises and lowers attachment on equipment, and diagnoses problems and makes adjustments and repairs.

Takes the lead and gives assignments to those assigned as helpers and mechanics.

Obtains, stores, records, safeguards, and properly uses equipment, materials, and supplies when performing work and may prepare itemized work orders to work performed and materials used in accord with established policy and procedures.

Tests overhauled equipment to ensure operating efficiency.

Welds broken parts and structural members.

May direct workers engaged in cleaning parts and assisting with assembly and disassembly of equipment.

Traces and locates defects and causes of mechanical problems to determine type and extent of repairs.

Overhauls, rebuilds, repairs, and services diesel, gasoline, and other types of combustion engines, automatic and no automatic transmissions, heavy duty drive line systems, and hydraulic utility systems and controls.

Selects and makes repairs in accord with appropriate repair specifications, manuals, and procedures.

Fits and installs parts such as pistons, valves, bearings, gears, and cylinders to appropriate tolerances and make appropriate adjustments according to specifications and guidelines.

Connects, aligns, and adjusts mechanical components to ensure proper operation of the vehicle.

Repairs cross driver or similar multisystem transmissions.

Repairs large and powerful 12-cylinder engine with pistons, which directly power multiple hydraulic and pneumatic systems and large multiple, interconnected engine systems.

Overhauls a variety of intricate fuel injection systems.

Overhauls and rebuilds transmissions such as those, which have braking, steering, and differential systems mechanically integrated with the transmission.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	▪ Safety Toe Boots ▪ Seasonal Environmental Conditions Training
Exposure to contact with Chemicals	▪ Hazard Communication Training ▪ Personal Protective Equipment Training ▪ Chemical Resistant Gloves ▪ Safety Glasses (solid lubricants) ▪ Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	▪ Fall Protection Training ▪ Fall Protection Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	▪ High Visibility Safety Vests ▪ Flagger/Work zone Safety Training ▪ Safety Toe Boots ▪ Site Safety Awareness Training
Exposure to Overhead Hazards	▪ Hard Hat
Injury from Lifting Heavy Objects	▪ Back Safety Training
Ergonomic Injuries to Back and Arms	▪ Tools with Ergonomic Grips ▪ Training in Safe Work Procedures
Exposure to Impact Noise	▪ Hearing Conservation Training ▪ Ear Plugs/ Earmuffs
Exposure to Heat/Cold Stress	▪ Cold weather clothing ▪ Gloves ▪ Hats ▪ Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	▪ Seat Belts ▪ Driver Awareness Training
Response to Incipient Fires	▪ Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	▪ Site Safety Awareness Training ▪ Personal Protective Equipment Training ▪ Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	▪ Lockout/ Tagout Training ▪ Work Site Safety Procedures

JOB/TASK CATEGORY: TREE MAINTENANCE

Examples of Work:

Supervises and works with staff performing tree and shrub maintenance tasks.

Uses pole shears, saws, axes and other cutting tools to prune trees or remove dead limbs; operates and feeds branches into chipper.

Scrapes decayed matter from cavities in trees using shovels or picks and fills holes with cement to promote healing and prevent further deterioration.

Cuts down trees using chain or handsaws.

Supervises the work operations and/or functional programs and has responsibility for effectively recommending the hiring, firing, promoting, demoting, and/or disciplining of employees.

Installs guying and bracing to prevent wind damage and encourage correct growth.

Uses ropes and pulleys to remove tree branches.

Bags and transplants trees and shrubs using burlap and shovel.

Sprays and dusts pesticides on shrubs and trees to control pests and diseases.

Fertilizes trees to promote growth using appropriate method and equipment.

Applies herbicides to kill brush and weeds.

Plants trees and shrubs by digging holes, setting, back filling, watering, and bracing.

Visually inspects trees and shrubs to diagnose diseased, infested, damaged, or unsafe conditions.

Performs minor maintenance to equipment or tools used.

Ensures safety procedures, rules and regulations are followed.

May operate motor vehicles and light construction equipment on a limited basis.

Supervises and may perform a variety of tasks such as planting grass seed, placing sod on areas, cutting brush, mowing grass, and loading and unloading refuse, removing snow, and so forth.

Will be required to learn to utilize various types of electronic and/or manual recording and computerized information systems used by the agency, office, or related units.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on uneven surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training
Exposure to contact with chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Go2:!:!:les (liquid lubricants)
Exposure to Falls Above Four Feet and Bucket Truck	• Fall Protection and Restraint Training • Fall Protection and Restraint Equipment
Exposure to electrical shock	• Lock Out/ Tag Out Training • Shock Resistant Equipment
Injuries resulting from Struck by and Caught on moving vehicles and equipment.	• High Visibility Safety Vests • Safety Toe Boots • Site Safety Awareness Training • Traffic Safety Zone Set-ups
Exposure to Overhead Hazards	• Hard Hat
Injury from lifting heavy objects	• Back Safety Training
Ergonomic injuries to back & arms	• Tools with ergonomic grips • Training in safe work procedures
Exposure to impact noise	• Hearing Conservation Training • Ear Plugs/ Earmuffs
Injuries due to forklift operations	• Powered Industrial Lift Truck Training • Seat Belts
Exposure to heat/cold stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the operation of motor vehicle and heavy equipment accidents	• Seat Belts • Driver Awareness Training
Response to incipient fires	• Fire Extinguisher Training
Hazards associated with specific locations on-site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat • Traffic Safety Zone Setup
Hazards associated with operation of chipper and stump grinder, chain saw, bucket truck	• Hearing Conservation Training • Ear Plugs/ Earmuffs • Training in safe work procedures • Traffic Safety Zone Setup • Fall Protection Training • Personal Protective Equipment Training • Fall Protection and Restraint Equipment • Fall Protection and Restraint Training

JOB/TASK CATEGORY: TRUCK DRIVER

Examples of Work:

Drives trucks with a single axle to pick up, haul, and deliver nonhazardous materials.

Receives written and/or oral assignments and drives trucks of varied types including trucks used for road maintenance and construction work and road oiling, snow plowing, and ice control work.

May assist with the repair and installation of snowplows and spreaders.

Picks up, loads truck, and delivers nonhazardous materials of varied types.

Performs minor repairs and adjustments on truck.

Supplies trucks with gas, oil, and water; keeps garage clean and in order, and keeps records of trips.

Checks, cleans, greases, washes, and performs the required adjustments to trucks and other auxiliary equipment.

Collects, loads, and unloads, with and without assistance, various types of equipment, furniture, laundry, food products, coal, ashes, garbage, or trash, and delivers same by truck to specified destinations.

Operates snow removal equipment to keep roads clear.

Maintains records of receipts, deliveries, fuel consumption, and mileage traveled.

Drives truck equipped with dump body to transport and dump loose materials such as sand, gravel, and bituminous paving material, by pulling levers and turning crank to tilt body and dump contents.

May inspect truck prior to operating for proper amounts of fuel, oil, water, and to see that tires are inflated and that lights and brakes work properly.

May make minor emergency repairs to trucks such as changing tires or installing light bulbs, fuses, and tire chains.

When not engaged **in** driving a truck or other equipment, may perform other work such as road and landscape construction, building maintenance and repair work, grounds keeping, laboring, or other unskilled work.

HAZARDS	CONTROL MEASURES
Slip/Trip/Falls - Walking on Uneven Surfaces	• Safety Toe Boots • Seasonal Environmental Conditions Training
Exposure to contact with Chemicals	• Hazard Communication Training • Personal Protective Equipment Training • Chemical Resistant Gloves • Safety Glasses (solid lubricants) • Goggles (liquid lubricants)
Exposure to Falls Above Four Feet	• Fall Protection Training • Fall Protection Equipment
Injuries resulting from Struck By and Caught On Moving Vehicles and Equipment	• High Visibility Safety Vests • Flagger/Work zone Safety Training • Safety Toe Boots • Site Safety Awareness Training
Exposure to Overhead Hazards	• Hard Hat
Injury from Lifting Heavy Objects	• Back Safety Training
Ergonomic Injuries to Back and Arms	• Tools with Ergonomic Grips • Training in Safe Work Procedures
Exposure to Impact Noise	• Hearing Conservation Training • Ear Plugs/ Earmuffs
Exposure to Heat/Cold Stress	• Cold weather clothing • Gloves • Hats • Seasonal Environmental Conditions Training
Injury from the Operation of Motor Vehicle and Heavy Equipment Accidents	• Seat Belts • Driver Awareness Training
Response to Incipient Fires	• Fire Extinguisher Training
Hazards Associated with Specific Locations On-Site	• Site Safety Awareness Training • Personal Protective Equipment Training • Hard Hat
Mechanical Equipment: Caught On, Caught In, Caught Between	• Lockout/ Tagout Training • Work Site Safety Procedures

Monroe MUA PPE Hazard Assessment

This assessment establishes the Authorities requirements of PEOSHA'S (Public Employee Occupational Safety and Health Act) Personal Protective Equipment Standard 29 CFR 1910 Subpart I 2/25/04

Date Issued: May 2003
Revised: June 2006
Revised: January 2009
Reviewed: May 2014
Reviewed: February 2018
Reviewed: June 2025

Purpose

It is the intent of the Monroe Municipal Utilities Authority to provide an assessment of hazardous exposures in the workplace, therefore, providing the necessary PPE required for each job duty. As it is written in the employee safety code manual, every individual of the operations department are provided the proper PPE, including steel toe boots to protect them in all areas of the workplace requiring PPE protection. Each employee is responsible for all PPE administered to them. Torn, cracked or defective equipment must be returned to management in order for new PPE to be administered.

Hazard Assessment at Monroe MUA Sites

Location	Equipment	Hazard	PPE Required
Mechanic Shop	Tire Machine	Pinch points	Gloves, safety glasses
	Rotor machine	Moving parts, metal burrs, flying metal	Gloves, safety glasses
	Car jacks	Pinch points	
	Parts cleaner solution	Slashing chemicals	Rubber gloves, apron, face shield, safety goggles
	Vehicle maintenance	Pinch points, moving parts, bump your head, fluids	Bump cap, latex gloves, safety glasses
	Paints (aerosol)	Fumes	Proper respirator
	Drill press	Moving parts, metal burrs, flying metal, pinch points, chemicals	Safety glasses, gloves, no loose clothing
	Wheel grinder	Flying metal, metal burrs, pinch points, burns	Safety glasses, gloves, no loose clothing
	Welder	Hot metal, weld flash, electric shock	Apron, gloves, shield (All welding certified)
	Air compressor	Compressed air, explosion	Gloves, safety glasses
	Crimping press	Pinch points	Gloves, safety glasses
	Pressure washer	High water pressure, burns, chemicals	Gloves, safety glasses
	Air tools	Moving parts, compressed air	Gloves, safety glasses
	Air grinding tool	Flying debris, compressed air	Gloves, safety glasses
Welding & Fabrication Shop	Drill Press	Moving parts, metal burrs, flying metal, pinch points, chemicals	Gloves, safety glasses, no loose clothing

	Geko metal press	Pinch points	Gloves, safety glasses, no loose clothing
	Grinding wheel	Flying metal, metal burrs, pinch points, burns	Gloves, safety glasses, no loose clothing
	Portable drills	Flying debris, metal burrs, pinch points	Gloves, safety glasses
	Welder	Hot metal, welding flash, electric shock	Gloves, shield, apron (All welding certified)
	Brake Lathe	Moving parts, flying debris, pinch points, metal burrs	Gloves, safety glasses, no loose clothing
	Metal Lathe	Moving parts, flying debris, pinch points, metal burrs	Gloves, safety glasses, no loose clothing
	Tin Brake	Moving parts, flying debris	Gloves, safety glasses
	Portable saws	Moving parts, flying debris	Globes, safety glasses
	Paints (aerosol)	Fumes	Proper respirator
	Air compressor	Compressed air, explosion	Gloves, safety glasses
	Pipe threader	Moving parts, flying debris, chemicals, metal burrs	Gloves, safety glasses
	Milling machine	Pinch points, flying debris, metal burrs, moving parts	Gloves, safety glasses, no loose clothing
	Circular saw band	Moving parts, flying debris	Gloves, safety glasses
Control Room	Aerator motor	Noise	Ear protection
Well Houses	Generators	Noise	Ear protection
	Chemicals (caustic soda, calcium hydroxide, sodium hypochlorite, CP34)		Nitrile rubber gloves, apron, latex gloves, face shield
	Air Stripper	Moving parts, noise	Gloves, ear protection
	Scaffolding (temporary usage)	Falling	Lifeline, harness
Sewer Pumping Stations	Wastewater	Bacteria, possible BBP sharps	Rubber or latex gloves, safety glasses
	Entry of Cantex (Dry Well Stations)	Gases, fumes, falls, noise, bumps	SCBA, SAR, tripod, hardness, gas detector, lifeline, hardhat

	Entry of wet wells	Gases, fumes, bacteria, BBP	SCBA, SAR, tripod, tyvex, gas detector, lifeline
	Basket cleaning	Splashes, sharps, bacteria	Tyvex, face shield, rubber gloves
	Transducer cleaning	Bacteria	Safety glasses, rubber gloves
	Entry of submersible wet wells	Gases, fumes, bacteria, BBP	SCBA, Tripod harness, rubber gloves, tyvex suit, rubber boots, gas detector
	Davit	Moving parts	Bump cap, gloves
	Bioxide	Chemicals	Safety glasses, rubber gloves
Lawn	Lawn Mower	Moving parts, noise, flying debris	Safety glasses, back support, ear protection, gloves
	Weed wackers	Moving parts, noise, flying debris, poison ivy	Safety glasses, back support, ear protection, gloves, long pants
	Chain saws	Moving parts, noise, flying debris, falling objects	Safety glasses, ear protection, gloves, no loose clothing
	Blower	Flying debris, noise	Safety glasses, ear protection
	Gas hedgers	Flying debris, noise, moving parts, pinch points	Safety glasses, gloves, ear protection, no loose clothing
	Pruners	Pinch points	Gloves
Misc. Equipment	Eel machine	Splashes, moving parts, bacteria	Safety glasses, rubber gloves or poly gloves worn under machines glove, no loose clothing
	Walk behind concrete saw	Dust, noise, moving parts	Respirator, gloves, ear protection, safety glasses
	All purpose saw	Dust, noise, moving parts	Respirator, gloves, ear protection, safety glasses
	Jack hammer	Noise, moving parts, dust, flying debris	Ear protection, gloves, hard hat, back support, respirator, glasses
	Tamper (Jump-n-jack)	Noise, moving parts	Ear protection, gloves, back support

	Tamper (plunger)	Noise, moving parts	Ear back support, gloves, ear protection
	Man lift	Falls, moving platform	Lanyard, harness
	Mud pump	Heavy	Gloves, back support
	Portable pressure washer	High water pressure, burns	Gloves, safety glasses
	Portable generators	Heavy, shock	Back support
	Tap machine	Heavy, metal burrs	Back support, gloves
	Jet Vac	Bacteria, splashes, high water pressure, lifting manhole lids	Safety vest, back support, hard hat, safety glasses, rubber gloves
	Street Sweeper	Dust, noise, moving parts	Safety glasses, gloves, respirator
	Backhoes	Moving parts, traffic	Gloves, hard hat, safety vest
	Ford Tractor	Moving parts	Gloves, hard hat
	Core saw	Moving parts, dust	Gloves, ear protection
	20 ton press	Pinch points, moving parts, flying debris	Gloves, safety glasses
	Metal chop saw	Moving parts, flying debris, metal burrs, burns	Gloves, safety glasses
	Trench tamper	Moving parts, machine rolling over	Gloves, heavy chain or strap

Hazardous Communication Standard
For the Monroe Municipal Utilities Authority

Date Issued: November 2004
Reviewed: January 2009
Reviewed: February 2018
Revised: January 2020
Reviewed: 6/23/2025

Origination Date:
Revision Date:

SAMPLE HAZARD COMMUNICATION PROGRAM

PURPOSE

The purpose of this plan is to establish a program and procedures for the safe use of hazardous chemical substances at MONROE MUA.

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS) 29 CFR 1910.1200 (General Industry) and 29 CFR 1926.59 (Construction Industry) call for the development of a hazard communication program when employees may be exposed to any chemical in the workplace under normal conditions of use or in a foreseeable emergency. In 2012, OSHA revised the HCS to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this program has been revised to comply with the requirements of the OSHA HCS 2012. The written hazard communication program will include and address the following criteria in order to satisfy the minimum requirements of the OSHA HCS 2012:

- List of all hazardous chemicals known to be present in the workplace or individual work area
- Methods used to ensure that all containers, including pipes and holding tanks, are labeled, tagged or marked properly
- Methods used to obtain and maintain safety data sheets (SDSs)
- Methods used to provide employees with information and training on hazardous chemicals in their work areas
- Methods used to inform employees of the hazards of non-routine work practices
- Methods used to provide the employees of other employers (e.g., consultants, construction contractors and temporary employees) on-site access to SDSs for each hazardous chemical that the other employer's employees may be exposed to while working in the workplace
- Methods used to inform the employees of other employers of precautionary measures that need to be taken to protect themselves during the workplace's normal operating conditions and in foreseeable emergencies
- Methods used to inform the employees of other employers of the labeling system used in the workplace

The hazard communication program will identify the following:

- Key personnel responsible for the program
- Location of chemical inventory list and SDSs
- Workplace labeling system
- Good work practices and procedures to minimize exposures
- How training will be performed
- Procedures to maintain the program and update the required information
- How records will be maintained

Nicholas Jengehino

Safety Coordinator

RESPONSIBILITIES

The MONROE MUA

NICHOLAS JENGEHINO, SAFETY COORDINATOR, is responsible for administering the hazard communication program.

This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals
- Maintaining a list of all hazardous chemicals and a Central (NJ) file of SDSs
- Ensuring that all containers are labeled, tagged or marked properly
- Providing new-hire and Biennial training for employees
- Maintaining training records
- Monitoring the air concentrations of hazardous chemicals in the work environment
- Properly selecting and caring for personal protective equipment
- Directing the cleanup and disposal operations of the spill control team
- Identifying hazardous chemicals used in non-routine tasks and assessing their risks
- Informing outside contractors who are performing work on public property about potential hazards
- Reviewing the effectiveness of the hazard communication program and making sure that the program satisfies the requirements of all applicable federal, state or local hazard communication requirements

The purchasing agent, NICHOLAS JENGEHINO, is responsible for:

- Contacting chemical manufacturers and/or distributors to obtain SDSs and secondary labels for hazardous chemicals used or stored in the workplace

The receiving department is responsible for:

- Reviewing incoming hazardous chemicals to verify correct labeling
- Holding hazardous chemicals in the receiving area until receipt of the SOS for the product.

Employees are responsible for the following aspects of the hazard communication program:

- Identifying hazards before starting a job
- Reading container labels and SDSs
- Notifying the supervisor of torn, damaged or illegible labels or of unlabeled containers
- Using controls and/or personal protective equipment provided by the Entity to minimize exposure
- Following Entity instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage, and replacement
- Knowing and understanding the consequences associated with not following Entity policy concerning the safe handling and use of chemicals
- Participating in training

CHEMICAL INVENTORY RTK LIST

Attached to this program is a list of hazardous chemicals used, produced and/or stored at MONROE MUA Copies of the (RTK Survey) chemical inventory list are available in the **MONROE MUA.**

This list will contain the product identifier that is referenced on the appropriate SOS, the location or work area where the chemical is used, and the personal protective equipment and precautions for each chemical product. This list will be updated annually, prior to July 15th, and whenever a new chemical is introduced to the workplace.

LABELS AND OTHER FORMS OF WARNING

Each container of hazardous chemicals received from the chemical manufacturer, importer or distributor will be labeled with the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party

MONROE MUA will use the GHS labeling system for secondary containers. When a chemical is transferred from the original container to a portable or secondary container, the container will be labeled, tagged or marked with a GHS label containing the following information:

- Product identifier **THIS IS NEW With GHS**
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s).

Portable containers into which hazardous chemicals are transferred from labeled containers and that are intended for the immediate use of the employee who performs the transfer do not require a label. If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled. Food and beverage containers should never be used for chemical storage.

Signs, placards, process sheets, batch tickets, operating procedures or other such written materials may be used in lieu of affixing labels to individual, stationary process containers as long as the alternative method identifies the containers to which it is applicable and conveys the information required for workplace labeling.

Where an area may have a hazardous chemical in the atmosphere (e.g., where extensive welding occurs), the entire area will be labeled with a warning placard.

Pipes that contain hazardous chemicals should be labeled in accordance with ANSI/ASME A13.1 and indicate the direction of flow. (Please note that this not a requirement of the OSHA HCS, but a best practice or requirement of local jurisdiction-NJ-RTK.)

Workplace labels or other forms of warning will be legible, in English and prominently displayed on the container or readily available in the work area throughout each work shift. If employees speak languages other than English, the information in the other language(s) may be added to the material presented as long as the information is presented in English as well.

> **Note:** After Dec. 1, 2015, distributors may not ship containers labeled by the chemical manufacturer or importer unless the label on the container meets GHS labeling requirements.

SAFETY DATA SHEETS

An SOS will be obtained and maintained for each hazardous chemical in the workplace. SDSs for each hazardous chemical will be readily accessible during each work shift to employees when they are in their work areas.

SDSs will be obtained from the chemical manufacturer, importer or distributor. The name on the SOS will be the same as that listed on the chemical inventory list. SDSs for chemicals or process streams produced by the Entity will be developed and provided by the Safety Coordinator.

The MONROE MUA will maintain the *"NJ-RTK Central file"* of all original SDSs. Hard copies of the master file will be located in the FILING CABINET, CENTRAL FILE IN LUNCH ROOM.

SDSs for new products or updated SDSs for existing products will be obtained by the purchasing agent and forwarded to the safety coordinator. The RTK Coordinator will then update the central file with new and/or updated SDSs.

If problems arise in obtaining an SDS from the chemical manufacturer, importer or distributor, a phone call will be made to request an SOS and to verify that the SOS has been sent. The phone call will be logged and a letter will be sent the same day. The Entity will maintain a written record of all efforts to obtain SDSs. If these efforts fail to produce an SOS the local OSHA office will be contacted for assistance.

EMPLOYEE INFORMATION AND TRAINING

Employees included in the hazard communication program will receive the following information and training prior to exposure to hazardous chemicals and when new chemical hazards are introduced to their work area.

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) Operations in the work area where hazardous chemicals are present.
- Location & availability of the hazard communication program, chemical inventory list & SDS's, HSFS
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance or odor of hazardous chemicals when being released
- Physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified of the chemicals in the work area
- Measures employees can take to protect themselves from hazards, such as appropriate controls, work practices, emergency and spill cleanup procedures, and personal protective equipment to be used
- Explanation of the labels received on shipped containers
- Explanation of the workplace labeling system
- Explanation of the SOS, including order of information and how employees can obtain and use the appropriate hazard information

Note: To facilitate understanding of the new GHS system, the OSHA HCS 2012 requires that employees be trained regarding the new label elements and SDS format by Dec. 1, 2013. Employers are required to update the hazard communication program and to provide any additional training for newly identified physical or health hazards no later than June 1, 2016.

NON-ROUTINE TASKS

The safety coordinator and the immediate supervisor of an employee performing a non-routine task, such as cleaning machinery and other process equipment, is responsible for ensuring that adequate training has been provided to the employee on any hazards associated with the non-routine task. Employees share in this responsibility by ensuring that their immediate supervisor knows that the non-routine task will be performed.

Special work permits are required for the performance of certain non-routine tasks, such as entry to confined spaces, breaking and opening piping systems, and welding and burning. For some special tasks, employees are required to follow special lockout/tag out procedures to ensure that all machinery motion has stopped and energy sources are isolated prior to and during the performance of such tasks.

CONTRACTORS

Prior to beginning work, the safety coordinator will inform contractors with employees working on Entity property of any hazardous chemicals that the contractors' employees may be exposed to while performing their work. The safety coordinator will also inform contractors of engineering or work practice control measures to be employed by the contractor, personal protective equipment to be worn by the contractors' employees, and any other precautionary measures that need to be taken to protect their employees during the workplace's normal operating conditions and in foreseeable emergencies.

Furthermore, the Safety Coordinator will advise contractors that they must comply with all OSHA standards while working on MONROE MUA property. Appropriate controls will be established with the contractor to ensure that MONROE MUA employees are not exposed to safety and health hazards from work being performed by the contractor and that MONROE MUA operations do not expose contractors' employees to hazards.

The Safety Coordinator will inform contractors of the workplace labeling system and the availability and location of SDS's/HSFS for any chemical to which contractors' employees may be exposed while performing their work.

RECORDKEEPING

Records pertaining to the hazard communication program will be maintained by the Safety Coordinator. The Safety Coordinator will keep the following records.

- Chemical inventory list
- Hazardous material reviews
- Copies of phone call logs and letters requesting SDS's/HSFS
- Employee training records
- Medical and exposure records, (29 CFR 1910.20)
- Warnings issued to employees for not following the hazard communication program.

Trenching and Shoring
For the Monroe Municipal Utilities Authority, Williamstown, NJ

Date Issued: November 2004
Revised: January 2009
Reviewed: May 2014
Reviewed: February 2018
Reviewed: 6/23/2025

Purpose

To establish a guideline to identify and correct any hazards relating to any excavation work being performed by the Authority.

Definitions

Trench – A narrow excavation made below the surface of the ground with a depth greater than its width and the width no greater than 15 feet. If a form or other structure installed or constructed in an excavation reduces the distance between the form and the side of the excavation to 15' or less (measured at the bottom of the excavation), the excavation is also considered a trench.

Excavation – Any cut, cavity or trench made by man causing earth removal.

Competent Person – A person who is knowledgeable and capable of identifying job site hazards and has the authorization to take corrective measures to eliminate them.

Hazardous Atmosphere – Any atmosphere considered potentially flammable, explosive, corrosive, poisonous, oxygen-deficient, oxidizing and toxic that could cause immediate danger or injury to workers exposed to it.

Protective Systems – A method of protecting employees from potential cave-ins from debris that could fall in from excavation. Protective Systems include support systems, sloping, benching systems and shielding systems that provide the necessary protection.

Support Systems – Structures such as bracing, shoring and underpinning that provide support to underground installations or to the sides of an excavation or trench.

Soil Structures
A number of stress cracks and deformation can occur in trenches and ditches. The increase or decrease of moisture content in the soil will have an adverse affect on the stability of the ditch or trench being excavated.

Sliding – This may occur as a result of tension cracks in the soil.

Boiling – indicated by an upward water flow into the bottom of a ditch and can occur when trench boxes or shoring are being used.

Tension Cracks – usually form at a horizontal distance of .500 to .750 times the depth of a trench and is measured from the top of the vertical face of the trench.

Toppling – occurs as a result of tension cracks in the soil and usually occurs when the trenches vertical face shears and collapses into the excavation.

Bulging – occurs when unsupported stress in the soil causes bulging of the vertical face of the trench. This may eventually give way causing a possible entrapment.

Heaving and Squeezing – Bottom heaving and squeezing occurs when downward pressure is created by the weight of the adjoining soil, causing a bulge at the bottom of the ditch. This can also occur when shoring and shielding have been properly installed.

Unit weight of soils – refers to the weight of one unit of a particular soil. The weight of soil may vary depending on its saturation content. One cubic foot of soil may weigh as much as 100-140lbs or more depending on the moisture content.

Soil Classifications
OSHA categorizes soil into 4 different classes ranging from A through D

Type "A" Soils – Cohesive soils such as clay, silty clay, sandy clay, clay loan, and sandy clay loan. Soils are not classified as "A" soils if it is subject to vibration, has been previously excavated, is part of a sloped layered system where the layers dip into an excavation on a slope of 4 horizontal to 1 vertical or greater, or has water infiltration.

Type "B" Soils – Cohesive soils such as angular graven, silt, silt loam, previously disturbed soils unless classified as Type "C", soils that are subject to vibration, dry and unstable rock and layered systems sloping into a trench a slope less than 4 horizontal and 1 vertical.

Type "C" Soils – Cohesive soils including granular soils such as gravel, sand, saturated soil from seeping water and submerged rock that is unstable.

Type D" Layered Geological Strata – Where soils are configured in layers. The soil must be classified as the weakest soil layer.

Responsibilities
The Authority is to ensure that **only** a competent person in trenching and shoring procedures is made available for excavating, is familiar with the ONE-CALL system for any markouts that have not been completed, ensure that all workers are wearing the proper PPE for the job, and provide proper shielding/sloping as necessary to safeguard employees. All employees are to wear the PPE that they were administered by the Authority, and utilize the shielding and sloping equipment when necessary. Any PPE or defective equipment must be reported to management immediately.

Good Work Standards

Call Before You Dig (1-800-272-1000) IT'S THE LAW!

- Before any excavation is to be done, a pre-construction review shall be conducted regarding work conditions and the safety around the job site. A meeting with the project supervisor, crew leader, safety coordinator and the work crew must be conducted before any work is started.
- Notify all customers and utility companies who may be affected atleast 7 days prior to starting the job and ensure that all markouts will be completed prior to the start date.

- Provide the necessary barricade and lighting equipment to prevent persons from falling into the trench or excavation. Only authorized personnel are permitted in the trenching area.
- No person is to enter a trench or excavation until it has been declared by the competent person that the work zone is safe.
- If a work zone has been declared unsafe by the competent person because of unsafe soil conditions, dangerous atmospheric conditions or equipment malfunction, exposed employees must be removed from the area immediately to ensure their safety.
- A competent person must supervise the setup of sloping, shoring or shielding systems.
- A competent person shall perform inspections prior to the start of a job or as needed throughout until the job is completed. He will check protective systems, hazardous atmospheres, and other hazardous conditions using the attached checklist.
- Where oxygen-deficient (oxygen levels below 19.5%) or hazardous atmospheres exist, such as excavations near landfills or excavations in areas where hazardous substances are stored near the work zone. Any excavation greater than 4 feet deep that contains the previously mentioned scenarios, the atmosphere must be monitored continuously.
- Any atmospheres that are oxygen-deficient or contain hazardous substances will require the use of Respiratory protection and proper ventilation.
- Precaution must be taken when using ventilation to prevent an employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 10% of the lower flammability of the gas.
- Any excavation being done near adjacent structures such as utility poles, buildings, sidewalks etc., must be approved by a P.E. (Process Engineer) to ensure the following: structures are protected by a support system, structures will not be affected by the excavation and ensure that the safety and well being of the worker(s) will not be compromised.
- Emergency rescue equipment such as a tripod, safety harness and breathing apparatus will be available in cave-in situations.
- Adequate means of exiting a trench over 4 feet must be provided to ensure a safe escape route out. Ladders being used must not be placed more than 25 feet apart, protrude no higher than 3 feet out of the hole and secured from shifting.
- Spoil from the excavation must be kept at least 2’ minimum from the edge of the open trench to prevent wall stressing or collapsing.
- Under no circumstances shall an employee walk under heavy equipment when loads are being raised such as the backhoes or crane truck.
- No open trench should be left unattended. Cones or barriers must be provided when working near walkways or sidewalks.
- Employees shall not work in excavations where ground water poses a safety issue. Any excavation containing ground water must first be surveyed to determine the rate of infiltration into the trench. The precautions necessary may vary in each situation, but could include special support or shield systems to protect from trench collapsing, dewatering devices (pumps) and finally the use of a lifeline or safety harness.

Monroe Municipal Utilities Authority

COMPETENT PERSON CHECKLIST

THIS CHECKLIST MUST BE FILLED BY THE COMPETENT PERSON PERFORMING THE EXCAVATION -1926.651(k)

Person Performing the Excavation:_____
Competent Person & Certification #_____
Date: _____
Outside Contractor Performing Exc._____

1. Location of the Excavation(circle all that apply)
   A. County Rd. B. Alongside structures(buildings.etc)

   C. Twp Rd. D. State Rd.

2. Purpose of Excavation
   Explain:_____

   _____

   Width:_____ Length:_____ Depth:_____

3. Soil Classification : (Circle all that apply)**1926 Subpart P Appendix A**
   Stable Rock Soils A B C

4. Is mobile equipment going to used near the excavation?
   Please circle
   Yes No List Equipment_____

5. If yes, establish a means of a warning signal when machinery is close to trench. **1926.651 (f)**

6. Have Spoils been placed at a safe distance from the trench(minimum 2')
   1926.651(j) Yes No

7. What type of support system is being used(Circle all that apply)**1926.652**

Sloping Timber Aluminum Shoring Trench Box Other:_____

8. Does the support systems meet OSHA standards and the Manufacturer's specifications? **1926.652** Yes No Explain_____

_____

9. Is the manufacturer's Data available for the system ? **1926.652**
Yes No

10. Is the support system being used prohibiting material from entering the Excavation) **1926.652** Yes No

11. Is the slope angle correct for the soil type?**1926 subpart P Appendix B**
Yes No Explain: _____

12. Are ladders being used properly,25' apart,3'above ditch,and securely fastened? **1926.651(c)(2)** Yes No Explain:_____

_____

13. Is water in the excavation?How is being controlled?**1926.651(h)**
Yes No Explain_____

_____

14. Has atmospheric testing been done? **1926.651(g)(1)**
Yes No Explain: _____

_____

15. Are confined space procedures being implemented? **1926.651(g)(1)**
Yes No Explain: _____

_____

16. Is there emergency rescue equipment available? **1926.651(g)(1)**
Yes No Explain: _____

_____

17. Were other underground utilities located prior to excavating?**1926.651 (a)(b)**
Yes No Explain:_____

_____

18. Are exposed utility lines supported or secured? Y N

19. Are all personnel at the jobsite wearing the proper PPE(Personal Protective Equipment)? **1910 subpart I**

Yes No

20. Have work zone and traffic control systems been properly setup?

1926.651(d) Yes No Explain:_____

_____

Call Before You Dig (800) 272-1000 It's The Law!

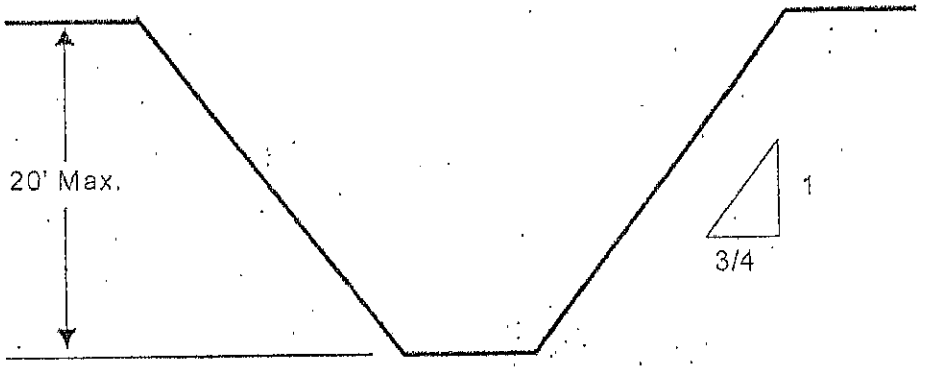
Excavation Diagrams

Slope Configurations

Excavations made in Type A Soil

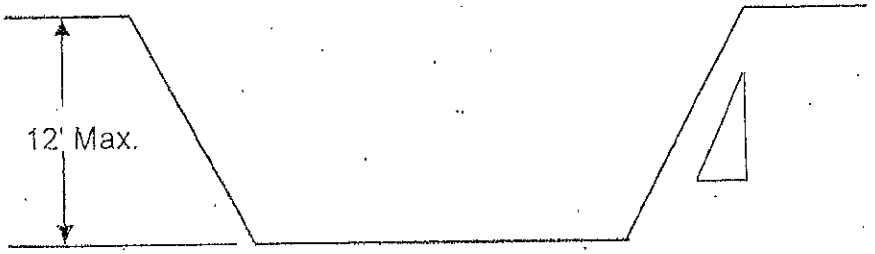
Simple Slope - General

All simple slope excavation 20-feet or less in depth shall have a maximum allowable slope of 3/4:1



Simple Slope - Short Term

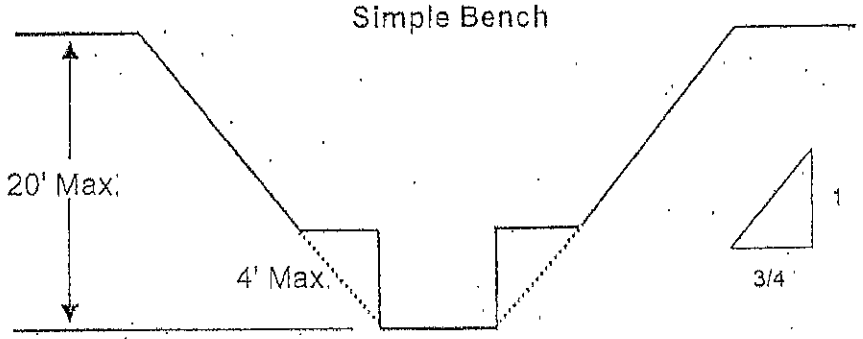
Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of ½ : 1



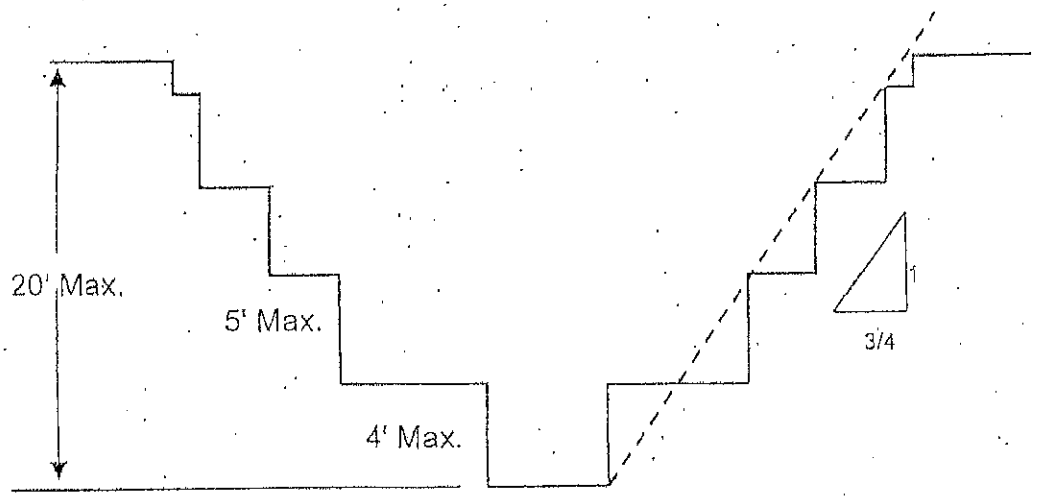
Benched Excavations

All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 3/4 : 1 and maximum bench dimensions as follows:

Simple Bench

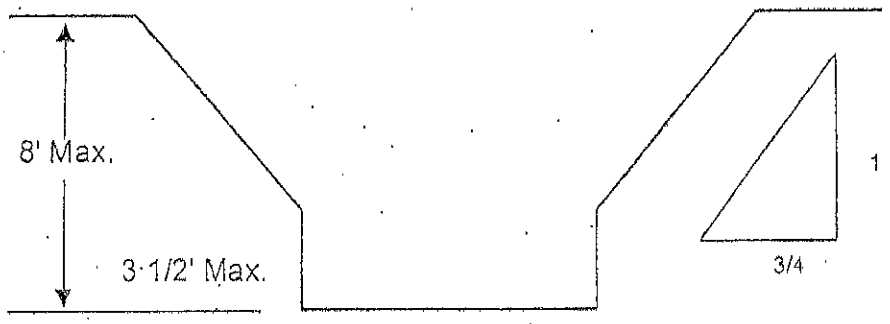


Multiple Bench

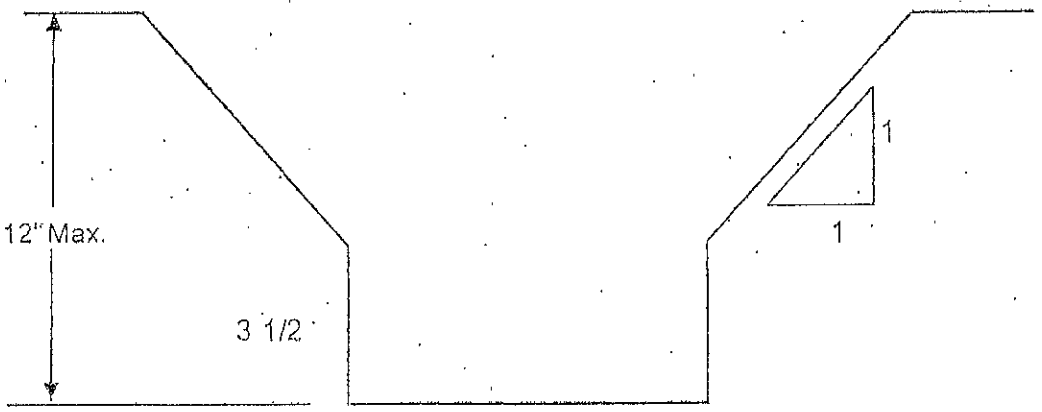


Unsupported Vertically Sided Lower Portion Maximum 8 Feet In Depth

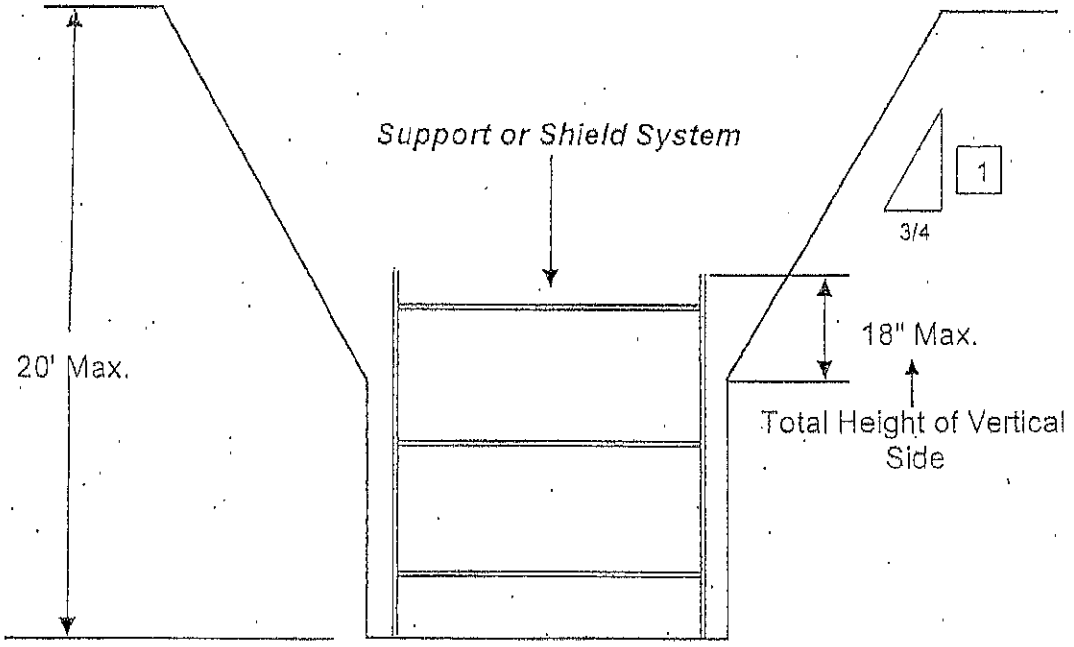
All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of 3 ½'



Unsupported Vertically Sided Lower Portion Maximum 12 Feet in Depth



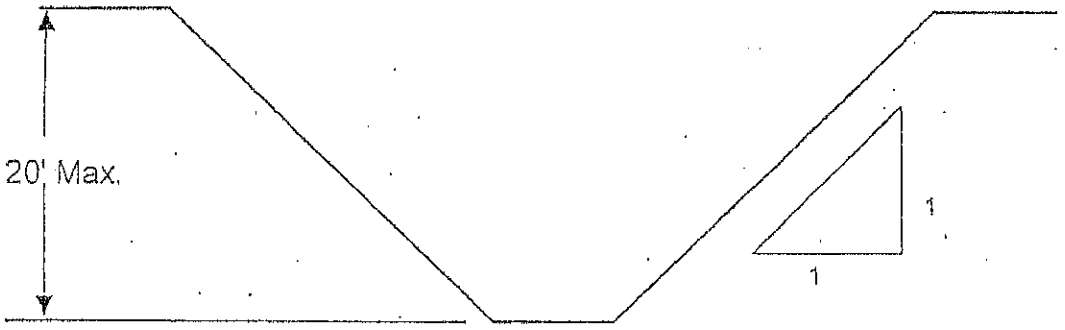
Supported or Shielded Vertically Sided Lower Portion



All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of ¾: 1. The support or shield system must extend at least 18 inches above the top of the vertical side.

Excavations made in Type B Soil

Simple Slope

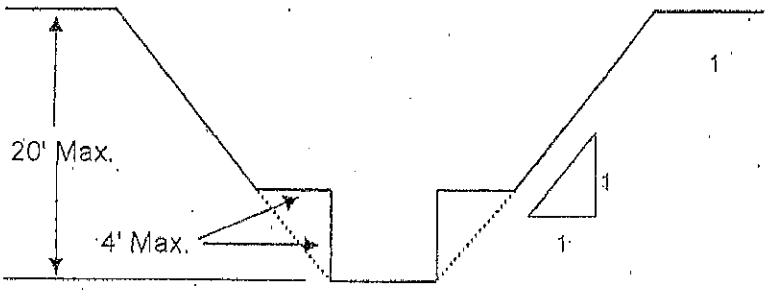


All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1 : 1

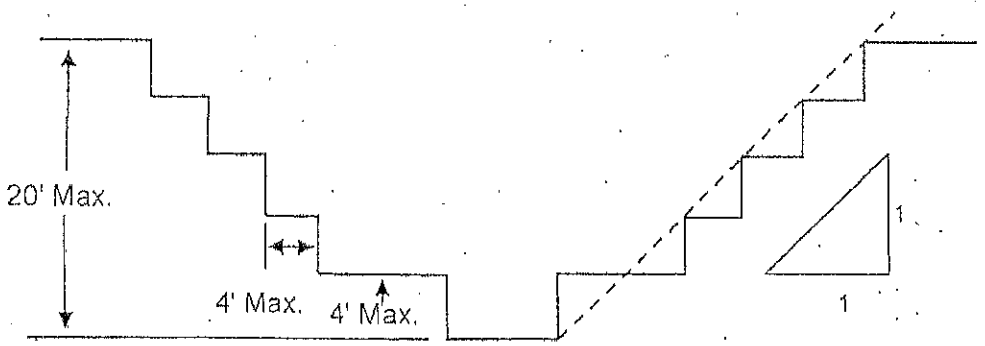
Single Bench

All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1 : 1 and maximum bench dimensions as follows:

This bench allowed in cohesive soils only

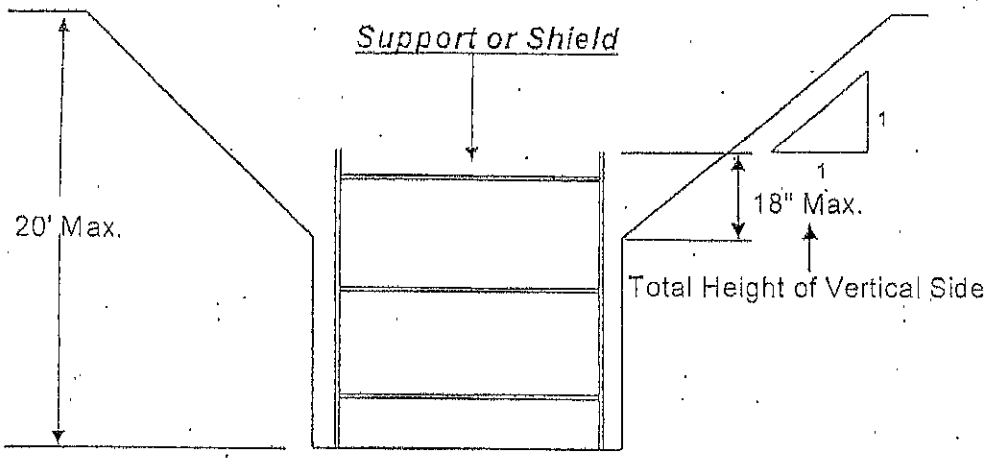


Multiple Bench



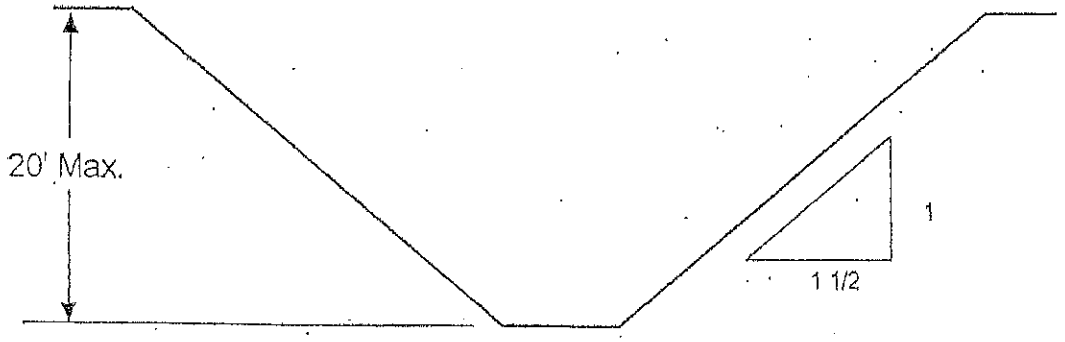
Vertically Sided Lower Portion

All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1 : 1



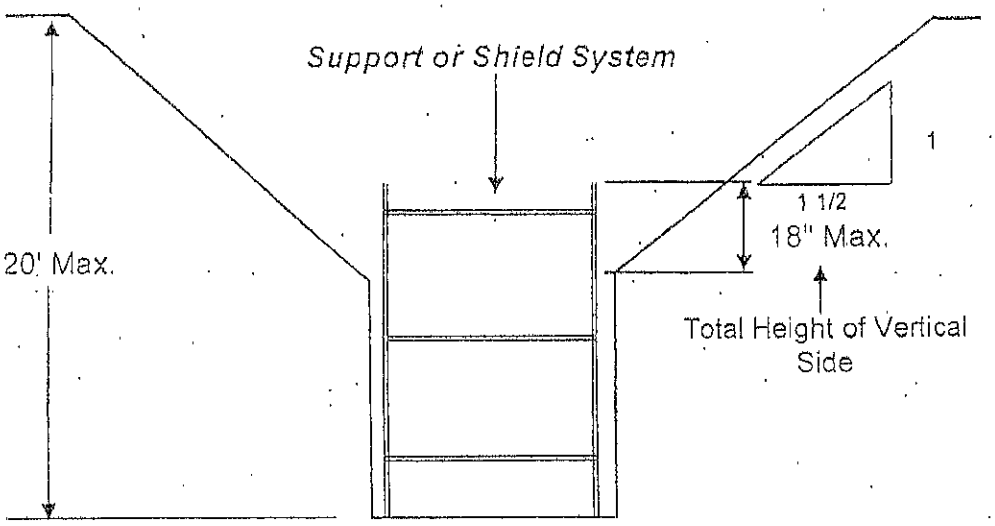
Excavations made in Type C Soil

Simple Slope



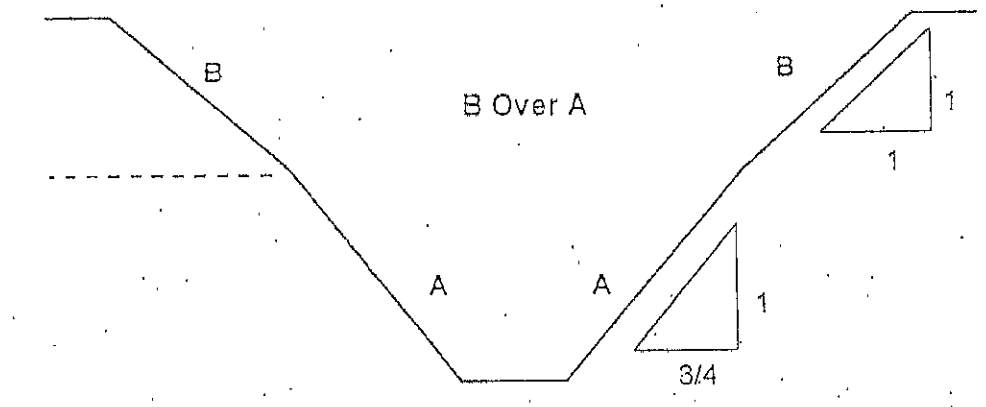
Vertical Sided Lower Portion

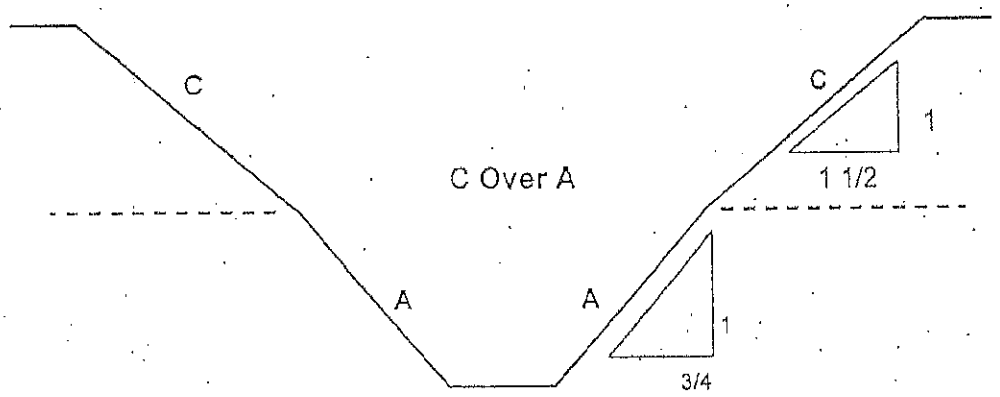
All excavations 20 feet or less in depth which have vertically sided lower portions shielded or supported to a height at least 18 inches above the top of the
All such excavations shall have a maximum allowable slope of 11/2 : 1

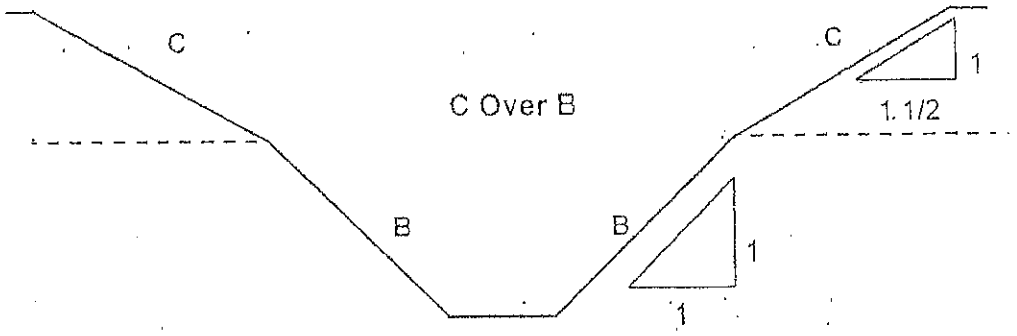


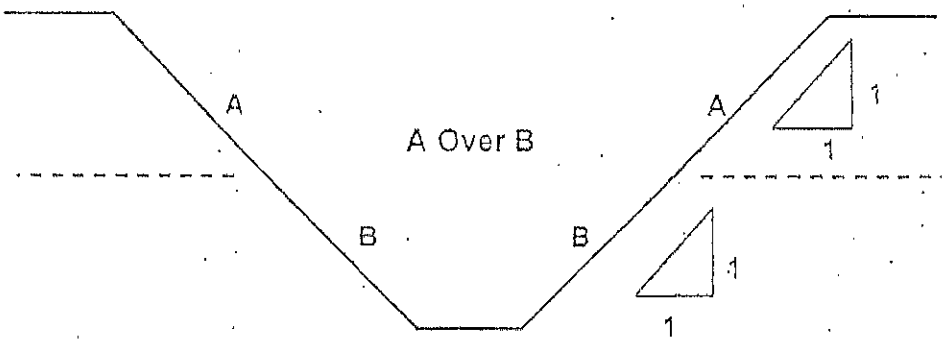
Excavations Made in Layered Soils

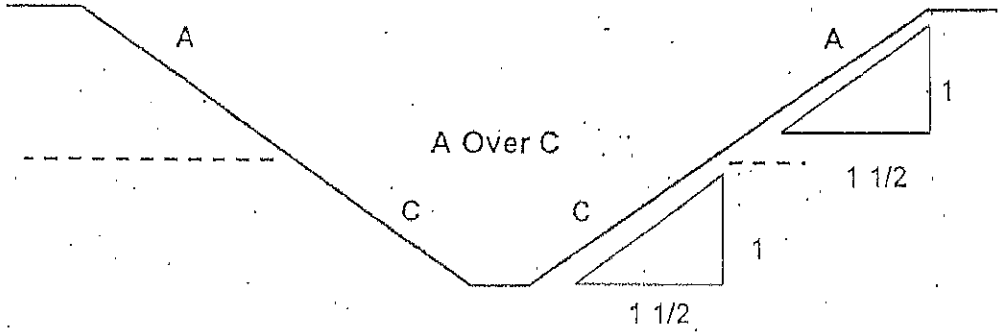
All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as follows:

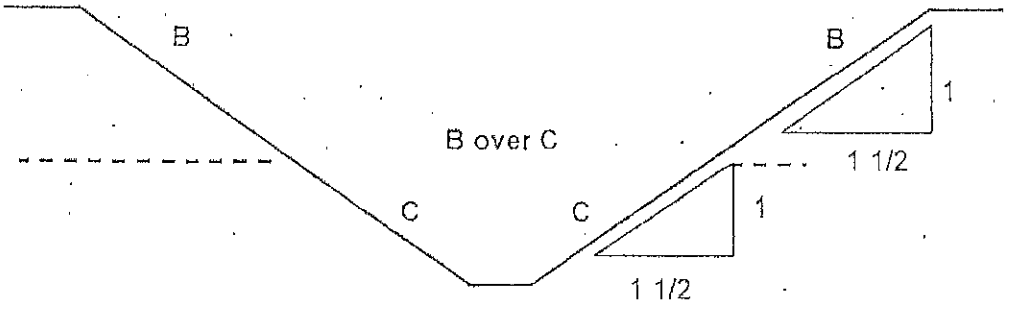







A
A Over B
A
1
1
B
B
1
1


A
A
1
A Over C
1 1/2
C
C
1
1 1/2


B
B
1
B over C
1 1/2
C
C
1
1 1/2

RISK ASSESSMENT

AND EMERGENCY RESPONSE PLAN

FOR THE MONROE

MUNICIPAL UTILITIES AUTHORITY

WILLIAMSTOWN, NEW JERSEY

Completed: 2/25/21

Updated: 12/30/22

Table of Contents

OBJECTIVE

This emergency plan has been prepared to provide guidelines for the Water Distribution and Sewage Collection Systems under emergency conditions caused by natural disasters, terroristic acts and unavoidable shutdown of equipment or components.

This plan objectives are as follows:

A. Provide all MMUA personnel a manual of procedures for responding to emergency situations

B. Meet Federal and State standards

C. Utilize all emergency contacts when or if a situation is to occur

VULNERABILITY ANALYSIS

A vulnerability analysis of the MMUA Water Distribution and Sewage Collection system is an estimation of. the degree in which the authority is affected in relation to the system performance capabilities in response to emergency situations. Whether the conditions are naturally occurring or man made, the authority has set forth this plan to protect our facility and the community we serve.

HURRICANE AND LIGHTNING STRIKES

Our facility is located approximately (40) Miles' West from the Atlantic Ocean, therefore the potential for a hurricane is possible. Gloucester County has not received a direct hit from a hurricane so damage assessment cannot be determined at this time. Lightning storms are common to this area. These storms occur most often in the summer months when the atmosphere seems to be more unstable due to temperature changes. All facilities are equipped with adequate lighting protection.

TORNADO AND WINDSTORMS

Coastal New Jersey is rarely affected by tornado activity. Throughout the past years, high windstorms have physically and financially caused severe damage the county. Wind gusts as high as 60mph would be recorded about every five (5) years. In accordance with the Window Loading Provisions of the New Jersey Department of Labor and Industry Codes all buildings and exposed structures should be kept up to code.

EARTHQUAKES

Earthquakes have been recorded in New Jersey, but no damage has been recorded in Gloucester County. The likelihood of damage from an earthquake is minimal.

TIDAL WAVES

Our facility is located approximately (40) Miles' West from the Atlantic Ocean. The Likelihood of damage from a tidal wave is minimal.

FOREST AND GRASS FIRE

Some M M U A facilities are located near wooded areas. Although the potential for structural damage is unlikely, fire could pose a threat to overhead power lines supplying the buildings. All buildings are equipped with backup generators for emergency conditions.

FLOODING AND STORM SURGES

The MMUA has no water treatment facilities located in a flood hazard location. However, the Authority's Northshore Drive and Lake Avenue Pumping Stations are located near lakes in the Cecil section of town. If a five hundred (500) plus year storm hits the area it could cause the lakes to overflow its banks. Gloucester County has had its share of torrential rains and flash floods. Heavy rains have caused high level alarms at sewage pumping stations at times but backup portable pumps alleviate the problem. Nevertheless, flooding could cause the most expensive upset at the plant and pumping stations of the collection system.

VOLCANOS

There are no active or inactive volcanos in this area.

FROST, FREEZE AND SLEET STORMS

The average temperature in Gloucester County is 35 degrees Fahrenheit in January, hard freezes and sleet storms are not uncommon during the winter months. The frost line averages 15" in depth posing no threat to the distribution system. Water main breaks seem to occurr more often in the winter due to the instability of ground temperatures. The Authority has installed carbon filters that are located outside some of the well houses. These filters and the pipework feeding them are insulated and heat traced. Freezing problems to the collection system are minimal. The majority of the pumps are submerged or located in cantex's 20' deep in the ground. The controls for the stations are enclosed in the buildings or cabinets which are heated.

DROUGHTS

Droughts have become more frequent in recent years. Hot summer months and the increase in housing developments have maximized the distribution system. The Monroe Municipal Utilities Authority water supply is from ground water. We have six wells which draw water from the Cohansey Aquifer. These wells range in depth from 143 feet to 160 feet. The Authority has two Aquifer Storage and Recovery (ASR) wells in the Potomac-Raritan-Magothy(P.R.M.) Aquifer. This will allow us to pump system water downinto the Aquifer in the winter to be recovered in the summer when water demands are much higher.

CIVIL DISORDERS

Monroe Township is a predominately middle to upper class housing area. Large scale industrial development is currently minimal and will continue to be as long as housing developments continue to flourish. The likelihood of disturbances due to disorders or uprisings are minimal.

STRIKES

Strikes are extremely unlikely, if a strike or walkout did occur our management personnel could handle the workload. After the date of September 11, 2001, human-caused disasters took on a new definition with terrorism and W.D. making daily headlines. BAU (Business as Usual) around significant American entities have changed dramatically. America's way of life has been altered mentally, emotionally and financially. Although security safeguards around our facilities have been addressed, there is always the possibility of threats from other man made accidents such as chemical spills, arson, sabotage, vandalism and equipment failure.

REDUCING SYSTEM VULNERABILITY

System vulnerability can be reduced by a combination of administration, operating and maintenance security preparations. The following measures taken are most important.

A. A strong security system for all MMUA sites. The main office, RT. 322 office and operations plant have surveillance cameras located inside and out of the buildings.

B. Well houses are checked and alarmed on a daily basis.

C. Pump stations are locked and sufficiently illuminated at night.

D. Maintaining adequate chemical supplies for the wells

E. Exercise generators and pumps on regular basis.

F. Continue to utilize the preventive maintenance program.

G. Conduct emergency drills and simulations periodically with MMUA personnel. Incorporate OEM and other emergency personnel in drills.

H. Continue in house training and provide job assignments to different individuals.

CHEMICAL DELIVERIES

All vendors delivering chemicals to the MMUA well sites are responsible to provide the following:

1. Valid driver's license.
2. Identification from the company they are delivering for.
3. License plate number

If the driver cannot provide the information, the chemical delivery will not be accepted. The operator taking the delivery must do the following:

1. Test the caustic and sodium hypochlorite upon arrival for the correct percentage.
2. Accept all information needed from the driver and document it at the well site.
3. Lock and alarm building when completed.

Preventive action for extreme flooding conditions that could increase flow rates to exceed the plant and pump station capabilities:

1. Continue daily checks of sewage pumping stations.
2. Continue sewer main cleaning programs by jetting known trouble spots.
3. Exercise generators and portable pumps regularly.
4. Top off equipment with-fuel.

PRESERVING VITAL RECORDS AND DOCUMENTS

Vital Documents and records should be kept in a location which is subject to neither fire or dampness. The main office, RT. 322 office and the operation plant contain the following:

A. Daily logs

B. Copies of state reports

C. Copies of federal reports

D. Contractual documents

E. Water/sewer mapping

F. Lab results

All data from the main office are backed up on the server on a daily basis. One copy is locked in a fire proof safe at the office and the others are kept offsite.

EMERGENCY ASSISTANCE FROM TOWNSHIP

POLICE AND FIRE DEPARTMENT

Certain aspects of emergency response could involve the local police and fire department. Fortunately, the MMUA has personnel actively involved with the Williamstown Fire Department, who can provide immediate communication if trucks or other medical supplies are needed. The Monroe Township Police Department has been asked by the Authority to do the following:

A. Periodic checks around well houses and pumping stations.

B. Provide assistance if needed during emergencies.

C. Notify any MMUA personnel if an accident occurs involving chemicals or hazardous materials.

EMERGENCY RESPONSE FACILITY

The Emergency Response Facility is the break room in the Operations building at the sewer collection plant. When the primary person on call receives a call from the answering service or an alarm from a well or lift station concerning a resident or a minor problem with a well or pump station, he usually handles the call alone. When a call requiring a crew is needed or for additional assistance, the Assistant Superintendent is to be called.

This building also contains backup pumps, generators, trucks, heavy equipment and water distribution and sewage collection system maps.

REASONS FOR UPDATING THE PROGRAM

A procedure should be established for the Authority and the Authority engineers to evaluate emergency situations. The following areas should include:

A. Performance of emergency backup and equipment.

B. Mutual aid agreements and/or contracted assistance.

C. Performance of alarm systems.

D. Personnel training progress.

Response time (availability)

*This plan will be reviewed yearly

EMERGENCY CONTACTS/MUTUAL AID AGREEMENTS

Executive Director	Wendy Mahoney	856-629-1444
Superintendent	Frank Cossabone	856-562-7978
Assistant Superintendent	Ralph Manfredi III	609-790-1968
Engineering Firm	Bryson & Yates	856-589-1400
Electrical Contractor	Power Electrical	856-478-6308
Pump Maintenance	IIT Flygt Corporation	1-800-413-5948
Complete Control Service	Well Controls	856-692-5487
Atlantic City Electric	Electric Company	1-800-833-7476
South Jersey Gas	Gas Company	1-800-582-7060
AT&T	Telephone Company	1-800-288-2020
Police & Fire Department	Emergency	911
Office of Emergency Management		856-728-9800 X 250
Gloucester County		856-307-7100
Gloucester County Util. Auth.		856-423-3500
A.C. Schultes	Well Pump	856-845-5656
John P£1ugfelder	Heaters & Diesel Fuels	856-629-6442
GenServe	Generator Repair	856-324-0459
Garden State Labs		1-800-273-8901

EMERGENCY RESPONSE PROCEDURE

This section presents emergency response procedures as a guide to all authority personnel. The plan addresses emergencies involving the water treatment facilities and sewage collection systems. Potential emergencies that could affect normal operation at the water treatment facilities are as follows:

A. Power Outages

B. Equipment Failure

C. Chemical spills either by mechanical or human error

D. Fuel spills or fuel leaks

RECOMMENDATIONS FOR POWER FAILURE

1. When the primary power is totally lost or a phase is out:

   A. All water treatment facilities are equipped with backup generators to handle power outages.

   If for some reason a generator becomes inoperable and must be shut down, the following vendors should be notified:

   Gen Serve 856-324-0459

2. If a phase is lost or power is out the following utility should be notified:

   Atlantic City Electric 1-800-642-3780

EQUIPMENT FAILURE

Notice is always provided to the Assistant Superintendent of any problem found by on-call personnel.

WELL PUMP FAILURE

Should an operator notice something unusual with a well pump either by sight or sound, the unit must be shut down immediately. All information must be given to the supervisor so the following can be notified:

A.C. Schultes 856-845-5656

WELL CONTROL PANEL FAILURE

In the event that an operator encounters a problem with a control panel either mechanically or electrically the Assistant Superintendent will be notified. The following vendor should be contacted immediately:

Complete Control Service 856-692-5487

CHEMICAL FEED PUMP FAILURE

All the chemicals used at the well houses are equipped with two (2) pumps, should an operator encounter a problem with a chemical pump that is not working or is leaking he should shut the unit down immediately and activate the backup pump. The operator should contact the Assistant Superintendent to have the pump looked at by the service department.

RECOMMENDATIONS FOR PROCESS DURING EOUIPMENT FAILURE AT SEWAGE PUMPING STATIONS AND SEWER PLANT

Notice is always provided to the Assistant Superintendent of any problem found by on-call personnel.

PUMP FAILURE

All sewage pumping stations are equipped with two (2) or three (3) pumps. If a pump fails it must be pulled and inspected. If pump needs to be serviced, the following should be called:

ITT Flygt Corporation 1-800-413-5948

In the event of a major pump failure such as; raw sewage pumps, emergency pumps and discharge piping, rental pumps and equipment can be obtained through:

Godwin Pumps 856-467-3636

CONTROLPANELFAILURE

Should an operator see or hear something unusual with the controls, he should shut the pump off. The immediate supervisor should be notified so remedial. action can be taken. The following company should be contacted if needed:

ITT Flygt Corp 1-800-413-5948

CHEMICAL FEED PUMP FAILURE

Sewage pumping stations using deodorizes are equipped with two (2) pumps. Should an operator experience a problem with a pump he should unplug the pump immediately and activate the backup. The immediate supervisor should be contacted so the pump can be repaired or replaced by the service department.

RECOMMENDATIONS FOR CHEMICAL SPILLS AT THE WATER TREATMENT FACILITIES

In the event of a spill at or around a water treatment facility the following procedures should be followed:

1. Shut down the well immediately
2. Determine location of the spill; township, street, address and nearest intersection
3. Chemicals involved
4. How much spilled; estimation of gallons
5. What caused the spill; vandalism, accident, mechanical?
6. Streams or lakes affected
7. Has the problem been corrected?

   *Date and time when the problem was corrected

*All information must be documented and given to the appropriate personnel

*The following procedures should be led by the Assistant Superintendent and/or Supervisor(s) in charge. All appropriate personnel and agencies should be contacted as needed depending on the severity of the spill.

The well will be turned back on once ALL corrective measures have been taken.

COLLECTION SYSTEM EMERGENCIES
RECOMMENDATIONS FOR SEWAGE BLOCKAGES

A blockage in the system may cause a backup of raw sewage to flow onto some customers property or overflow out of a manhole. This poses a health threat to the environment if enough raw sewage flows into the storm drains making its way to streams and other waterways. It is imperative that all blockages are cleared in a timely manner so that normal service is restored t o the customer and the threat of raw sewage entering a waterway can be reduced or prevented. Blockages are usually found by the customer because they experience problems with water drainage from inside the house or there is debris visible from theclean out outside.

GATHERING INFORMATION

When an employee receives a call from a customer or answering service who states that raw sewage has overflowed into their home; the following procedure should be taken:

I. Determine if the blockage is the homeowner's or the utilities problem by checking the clean out and both upstream & downstream manholes

2. If the blockage is on the homeowners side, inform the homeowner that the problem is internal and that a plumber is needed. Explain that the MUA's responsibility stops at the curb line

3. If the blockage is on the MUA side:

   A. Check sewer main first and if blockage is in main jet main until clear
   B. If main is flowing normal and cleanout is full, plunge cleanout to try to breakup stoppage
   C. Jet or snake lateral if plunging does not work

4. If substantial damage was done to the residents home due to MMUA problem, the operator must notify management. Raw sewage is NOT to be cleaned up by MMUA personnel.

5. A report must be written and given to the supervisor with the following information: A completed work order or OT slip that has:
   A. Date and time of the incident.
   B. The name and address of the homeowner.
   C. Cause (main blockage, pump station failure.)
   D. Determine location of damage and how much damage.
   E. Submit pictures taken from residency if taken

RESPONSE PROCEDURE

There are two (2) types of blockages that can be considered threatening or non-threatening:

Threatening- Surcharge Condition

1. Sewage backup into a basement from the collection system.
2. Manhole discharging raw sewage.

If a manhole is discharging raw sewage, it is the responsibility of the MMUA personnel to contact the Assistant Superintendent (or Supervisor) to take appropriate action.

Non-Threatening

I. Sanitary debris
2. Roots
3. Residential blockages (homeowners' problem)

RECOMMENDATIONS FOR PUMP STATION FAILURES

All MMUA pumping stations are equipped with at least two (2) pumps, therefore complete pump station failure is unlikely, but still possible. In the event of an alarm at a pump station an operator will respond to the station and report back to the supervisor on what was found. It would then be determined if a service crew is needed. All pumping stations are equipped with alarm systems that dial out to the following personnel:

1. On call phone
2. Assistant Superintendent
3. Superintendent

*This order constantly repeats itself until alarm is answered

POWER FAILURES AT PUMPING STATIONS

If a pumping station experiences a power failure, the auxiliary generator will immediately operate. If the generator for some reason becomes inoperable, a portable generator needs to be transported to the station.

EMERGENCY TANKERS FOR LIFT STATIONS AND PLANT

Should an emergency tanker be needed at the sewer plant or any lift station the following vendor is in place:

English Sewer Disposal: 856-358-4771

SPILLS INVOLVING THE COLLECTION SYSTEM

In the event of a spill at the sewer plant or in the collection system, the following procedures should be followed:

Obtain and Record the Following Information

1. Location of the spill; township, street, address and nearest intersection
2. Liquid of chemicals involved
3. Date and time the spill occurred
4. How much spilled (estimation of gallons)
5. What caused the spill; vandalism, mechanical, electrical, blockages caused by grease buildup or roots
6. Streams or lakes affected
7. Has the problem been corrected
8. Date & time when the problem was corrected

*Work orders MUST be used to record all incidents

All appropriate agencies must be notified as needed for each incident which may include:

- NJ DEP Hotline
  - 1-877-927-6337
- Monroe Twp Office of Emergency Management
  - 856-728-9800 EXT: 250

ON CALL AND OFF DUTY PERSONNEL

The beginning of each year management draws up an on call list which is posted at the sewer plant and provided to every employee and posted in each MMUA office. This provides coverage for the Authority twenty-four hours a day seven days a week for the entire year. Each man is responsible for the week that he is scheduled to work. If the primary man has a situation that requires secondary help, the Assistant Superintendent will call in additional personnel or a crew if needed. Employees are expected to respond and comply with the on call requirements. All overtime is documented so management has an overview of each employee. Management can also determine which employee has accepted or declined the mandatory overtime.

PUMP STATION DATA

Each MMUA sewage pumping station has a telephone line and voice activated alarm box. The box provides valuable information because it will notify the answering service when or if a problem has been detected at one of the pumping stations. An operator can call the station to determine the problem or status of the pump station. This plays a vital role in responding to any pump station emergency. A list of MMUA pump station telephone numbers and their location is provided at the end.

MONROE MUA WELL HOUSES

Location	Well	Phone Number
Water Street Williamstown, NJ	#5	856-629-5300
Lake Avenue Williamstown, NJ	#6	856-875-1618
Corkery Lane Williamstown, NJ	#7	856-875-1626
Black Horse Pike 1335 N. Black Horse Pike Williamstown, NJ	#8	856-629-2243
Tuckahoe Road Williamstown, NJ	#9 &#10	856-875-7516
1225 Coles Mill Rd Williamstown, NJ	#12	856-629-3289
4675 Jackson Rd	#13	856-404-9069

MONROE MUA WATER STORAGE FACILITIES

The Monroe Municipal Utilities Authority storage facilities consist of:

- Three (3) water towers
- Three (3) above ground storage tanks

Location	Capacity
Herbert Blvd. Williamstown, NJ	300,000 gallon water tower
1100 Corkery Williamstown, NJ	1 million gallon water tower
1335 Black Horse Pike Behind Knights of Columbus Williamstown, NJ	1 million gallon water tower
1452 Glassboro Rd Williamstown, NJ	2 million gallon above ground water storage tank
766 N. Tuckahoe Road Williamstown, NJ	2 million gallon above ground water storage tank
1935 S. Black Horse Pike Williamstown, NJ	1 million gallon above ground water storage tank

Total above ground storage 2.3 million
Total ground storage facilities 4.0 million
322 Interconnect 2 million gallon above groundwater storage

MONROE MUA INTERCONNECTIONS

There are four (4) interconnections in our distribution system. Two (2) with the Borough of Clayton and one with Washington Township and one with the Borough of Glassboro. This enables us in the event of an emergency to obtain water through the interconnections or supply water to these communities.

Location	Municipality	Size
Fries Mill Rd	Clayton	12”
Deschler Blvd	Clayton	8”
Berlin-Cross Keys Rd	Washington Twp	12”
1452 Glassboro Rd	Glassboro	12”

Cyber Security

The Monroe MUA has a very secure, personalized and detailed SCADA program that controls all the major functions of each of their wells. Some of these functions include:

- Level sensors
- Pump controls
- Alarms
- Data recording

*Chemical feeds cannot be controlled remotely through the SCADA. Chemicals can be monitored through the SCADA but cannot be turned on or off through it.

The Monroe MUA has a Cyber Security agreement in place to protect the SCADA from outside threats. *The Cyber Security Agreement is attached*

The SCADA and Cyber Security was created and is monitored by:

- Complete Control Services, Inc.
  1515 Grant St.
  Egg Harbor City, NJ 08215
  Telephone: 609-593-6219

Drinking Water Sector
Emergency Response Plan Template
Community Water Systems

This template is intended to assist in the development of an Emergency Response Plan (ERP) tailored to individual water systems. It is suitable for any water system and can be modified to fit each system's specific needs. For large water systems, additional sections should be added, as necessary, to address various complexities. Smaller systems, however, may find that certain sections are not applicable. In making such decisions, special attention should be paid to ensure that regulatory obligations for content are met (N.J.A.C. 7:19-11.2). Additionally, this document has been revised to incorporate requirements created under America's Water Infrastructure of 2018 (AWIA), which has some overlapping, but not identical requirements.

An ERP may not be a single document. Depending on the size and complexity of the system, as well as the management structure, an ERP may contain references to various existing documents (e.g. communication protocols, individual Emergency Action Plans, check lists, additions to existing operations manuals, appendices, etc.). In this case, an overview document, as well as specific locational information for the referenced documents, is recommended.

It is important to note that an ERP is a "living" document that requires regular updates. Additionally, it should be flexible and easily understood, while supplying sufficient detail to ensure that personnel can implement necessary emergency procedures without question or delay ensuring continuity of operations.

Disclaimer: This Emergency Response Plan (ERP) template is provided as guidance only and establishes a suggested format to be followed in the preparation of an Emergency Response Plan. Every section of this template may not be applicable to every water system and all potential emergency situations may not be identified. It is the responsibility of the water system to evaluate their particular vulnerabilities and the appropriate responses to them. This template should be modified as necessary to reflect the specific conditions of the water system.

Acknowledgements: This ERP template was prepared from various standards on the content of ERPs, including but not limited to: the New Jersey Water Allocation Rules, specifically N.J.A.C. 7:19-11.1 et seq.; the National Water Association's Rural and Small Water and Wastewater System Emergency Response Plan Template dated March 2003, the United States Environmental Protection Agency's (EPA) Emergency Response Plan Guidance for Small And Medium Water Systems dated April 7, 2004; the EPA's Response Protocol Toolbox: Planning for and Responding to Drinking Water Contamination Threats and Incidents - Module 1:Water Utilities Planning Guide; New York Rural Water Association's Water Supply Emergency Response Plan Template; and the Massachusetts Department of Environmental Protection, Drinking Water Program Emergency Response Planning Guide for Public Drinking Water Systems, EPA Emergency Response Plan Template and Instructions for AWIA of 2018.

New Jersey Department of Environmental Protection
Division of Water Supply & Geoscience
Mail Code 401-04Q
P.O. Box 420
401 East State St.
Trenton, NJ 08625

Version: March_2021
http://www.nj.gov/dep/watersupply/emergency.html

EMERGENCY RESPONSE PLAN
DRINKING WATER SECTOR

Public Water System Name: Monroe MUA
Public Water System ID (PWSID) No: NJ0811002

Physical Address: 372 S. Main St.

City: Williamstown
State: New Jersey
Zip Code: 08094
General Phone Number: 856-629-1444

Prepared by (signature & title)**: Frank Cossabone**

Reviewed by (signature & title)**:**

Licensed Operator (signature & License Number):

Frank Cossabone: C3 750568 W2 629324 T3 999524

Date Completed: 8/4/2022

Date Revised: 8/1/2024

Plan Distribution

Copies of the emergency response plan have been distributed to all water supply personnel and other officials as indicated below.

Recipient/Title	Distributed By	Date
Wendy Mahoney	Frank Cossabone	
Ralph Manfredi III	Frank Cossabone	
Nick Jengihino	Frank Cossabone	

Table of Contents

APPENDICES:

Section 1 – Emergency Response Personnel/Communications
a. Chain of Command

Name/Title	Responsibilities During Emergencies	Contact Numbers	ICS Certifications
Frank Cossabone Superintendent	Responsible for developing, directing and maintaining communication with the multiple agencies on site	856-562-7978	
Wendy Mahoney Executive Director	Directing Public Relations and media	609-560-0878	
Ralph Manfredi III Assistant Superintendent	In charge of the operations personnel and overseeing all work and construction	609-790-1968	
Nick Jengihino Safety Coordinator	Ensures all work zones and safety materials are in place and maintains a safe work zone and atmosphere	609-513-7921	

Section 1 – Emergency Response Personnel/Communications
b. Incident Command System (ICS) Roles

The National Incident Management System (NIMS) is a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work together seamlessly and manage incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, property and harm to the environment. A primary component of NIMS is the Incident Command System (ICS) which is a fundamental element of incident management. The use of ICS provides standardization through consistent terminology and established organizational structures.

As per Executive Order #50 (Acting Governor Richard J. Codey) principles of NIMS/ICS will be used for all emergency incidents. Public works, and other skilled support personnel, such as equipment operators, who provide immediate support services during prevention, response, and recovery operations shall receive ICS and NIMS training. (See Appendix A for further information.)

As per ICS, the Command and Management roles are as follow:

Incident Commander: This individual is reachable 24 hours a day, 7 days a week and is responsible for decision-making during the event and for coordinating efforts with local emergency responders. All personnel involved in the incident will report to the Incident Commander. Should the incident escalate, the Incident Commander may delegate this position to an official from local, State or Federal government and assume a support role: in this situation, a full briefing of the situation will be given to the incoming Incident Commander and all staff will be notified of the change.

Information Officer: This individual is the primary spokesperson to the media or other organizations requesting information concerning the event. All Staff are advised to refer any requests for information directly to the Information Officer and not to talk directly to members of the press.

Planning Officer: This individual is responsible for preparing the "Incident Action Plan" which addresses the necessary response and recovery activities. The planning officer constantly evaluates incoming information and revises the Action Plan as necessary.

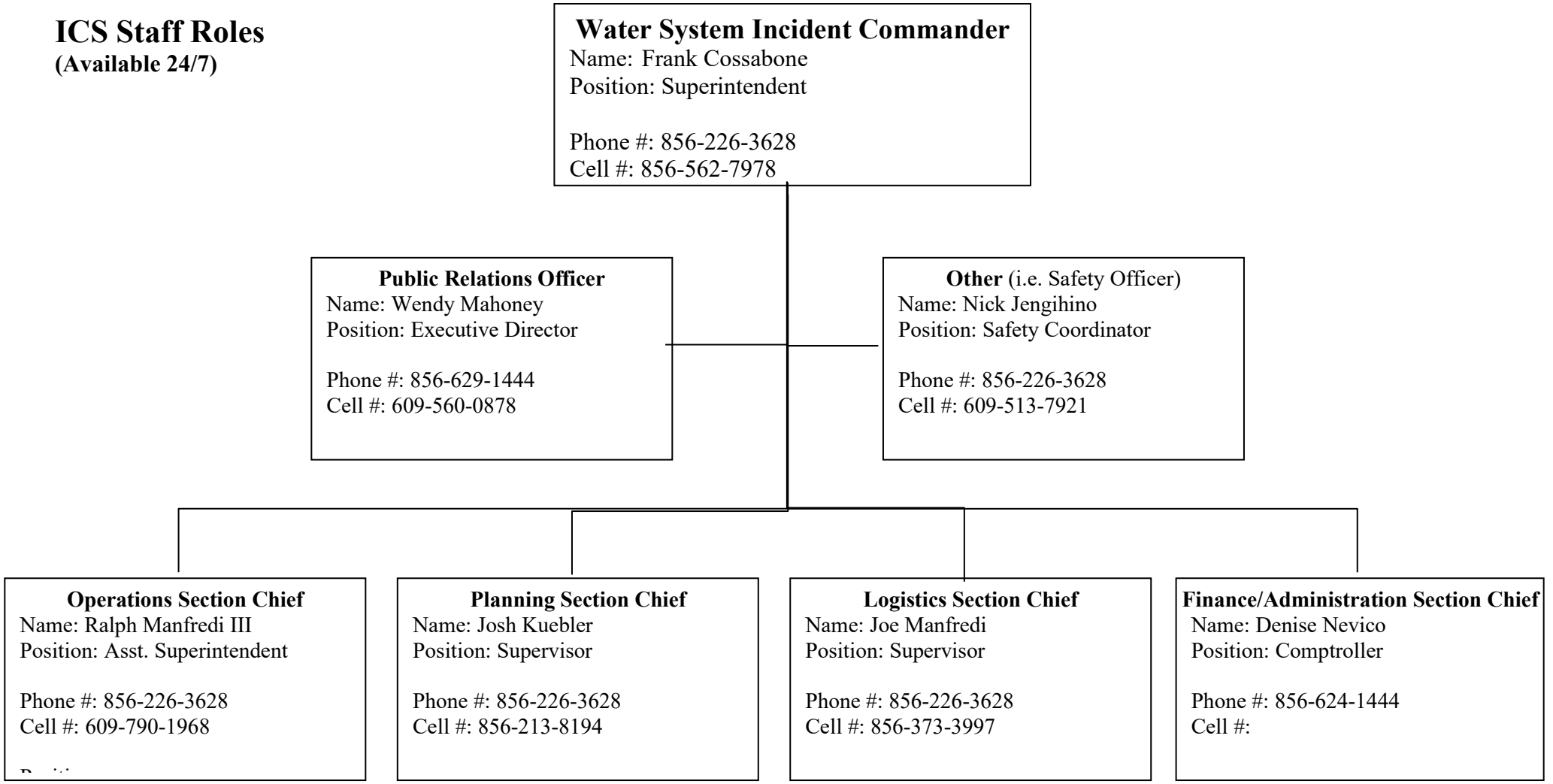
Operations Officer: This individual(s) will be responsible for carrying out the Action Plan and directing resources.

Logistics Officer: This individual (s) will be responsible for providing the necessary resources and any additional services required for responding to the incident.

> **Note**: The duties of Planning, Operations and Logistics may be carried out by one individual or by several, depending on the size and severity of the incident.

Finance/Administration Officer: This individual will be responsible for on-site financial management, especially the provision of funds to obtain the necessary equipment or supplies required to respond to the incident. This individual will activate contracts, deal with vendors and make cost estimates of alternative strategies. This individual can also monitor the costs associated with responding to the incident, although this is a secondary function.

ICS Staff Roles
(Available 24/7)



Additional Emergency Response Personnel:

Name/Title	Role	Contact Information	Alternate Contact Info.
Dan Suarez	Operator	856-718-0807	
Christina Hanratty	Human Resources	609-629-1444	

Section 1 – Emergency Response Personnel/Communications
c. External Contact Information

Other agencies to be contacted in the event of an emergency:

Agency	Contact/Title	Contact Information	Notification Criteria
Local Police	Ryan Borkowski/Chief	856-728-9800	Must be contacted in the event of a suspected or actual malevolent act.
Local Fire	Pat Mason/Chief	856-629-4414	
Health Department	Vicky Machulsky	856-728-9800	
Local Emergency Management	Jim Dehart	856-466-5842	
NJDEP -Bureau of Water System Engineering - Division of Water Supply & Geoscience Emergency Response Coordinator -Hotline, 24/7		(609) 292-2957 wsemergency@dep.nj.gov (877) 927-6337	Must be notified, in accordance with N.J.A.C. 7:10-2.4(b), as soon as possible but no later than within six hours of any emergency that has the potential to lessen the quality or pressure of delivered water.
NJ Office of Homeland Security & Preparedness Main Ofc, 24/7		(866) 472-3365	Must be contacted in the event of a suspected or actual malevolent act
Local FBI Office			Must be contacted in the event of a suspected or actual malevolent act
County OEM	Dennis McNutty	856-589-0911	
New Jersey Cybersecurity and Communications Integration Cell (NJCCIC)		1-866-4-SAFE-NJ	Must be contacted in the event of a cybersecurity attack
Mayor, Municipal Clerk, or an Authorized Designee of each affected municipality	Greg Wolfe/Mayor	856-728-9800 EXT:202	Must be contacted in the event of a Tier 1 PN no later than 1 hour after the system becomes aware. Must be given by both telephone and electronic mail.

Assistance Partners:

	Contact/Title	Contact Information
Mutual Aid Agreements	Chip Clark/Superintendent-Glassboro	609-774-2726
NJWARN		
Memorandums of Agreement		

Laboratories:

Lab	Contact/Title	Contact Information
Compliance: Garden State	Cindy Brandecker	908-566-8651
Emergency: Eurofins	Lorraine McCarthy	856-563-0121
24/7 Lab contact: Garden State	Cindy Brandecker	908-566-8651

Other External Contacts

The following will be contacted directly in the event of an emergency that may impact them:

Priority Notification Customers: (Sensitive populations [hospitals, nursing homes, schools, etc.], bulk purchasers)

Facility Name	Contact	Population Type	Phone # (24/7)
Carino Park	Frank Fewkes	Nursing Home	609-221-6303
Meadowview	Tom Rossi	Nursing Home	856-875-0100
Juniper Village	Tyrone Beal	Nursing Home	856-723-3299

Utilities:

Organization	Provider/Contact	Account #	Phone # (day)	Phone # (24/7)
Electric Company	AC Electric		1-800-642-3780	1-800-833-7476
Gas Company	South Jersey Gas		888-766-9900	1-800-582-7060
Sewer/Wastewater Company	Monroe MUA		856-629-1444	
Telephone Company	Comcast		1-800-934-6489	
One-Call	NJ One Call		1-800-272-1000	811
Other				

Media:

Organization	Contact	Phone # (day)	Phone # (24/7)
Newspaper – Local			
Newspaper – Regional			
Radio			
Television			
Social Media Liaison	Wendy Mahoney	856-629-1444	609-560-0878

Section 1 – Emergency Response Personnel/Communications
d. Communications Plan

This Section describes our Communication Plan which accounts for operating procedures and decision points to address:

1) Internal/external communication plans (i.e. who is responsible for notifying ER Team, outside agencies, etc. and what information is to be relayed)
2) Modes of communication to the public and how are they implemented (e.g. Reverse 911 via local PD)
3) Contingency measures for loss of communications (a switch to 2-way radios, meet at a certain location, etc.)

1) Frank Cossabone – Superintendent
2) Reverse 911 Monroe TWP Police Dept
3) MMUA Plant – Melva Ln

Section 1 – Emergency Response Personnel/Communications
e. Communications Equipment Inventory

An inventory of our communications equipment (e.g. mobile phones, two-way radios/Nextel phones, etc.) is as follows:

Type	Assigned to	Location	Number/Frequency/Channel
Cell Phones	All Personnel		
2-way radios	On-site Supervisors	MUA Plant	

Section 1 – Emergency Response Personnel/Communications
f. Personnel Protection

This section provides direction for **water system personnel** regarding the safe response to an emergency and covers Evacuation Procedures, Assembly Areas/Staff Accountability, Shelter Locations, and First Aid Equipment.

Water System Evacuation Procedures

All evacuation procedures should be done in a timely and calm manner with the meeting location being the MMUA Plant. If the emergency is at the plant the meeting location shall be the Operations office at 372 S. Main St.

Assembly Areas/Staff Accountability

Operations Dept- Ralph Manfredi III
Main St. office- Wendy Mahoney
Operations office- Frank Cossabone/Tee Gaudio

Alternate Work & Shelter Locations for Employees

Monroe TWP Police Dept
Pheiffer Center
Williamstown High School

Section 1 – Emergency Response Personnel/Communications
g. Staff Training/Drills

Required Training:

Frequency	Course Location	Course Description	Attendees	Date Held
EXAMPLE Annual	In house	ERP Overview	Emergency response team, operators, etc…	4/1/2016 4/1/2017
EXAMPLE AS necessary	Online/outside	ICS 100 / NIMS 700	New employees	
AS necessary	MUA Plant	ERP Overview	All Employees	11/2021
Yearly	MUA Plant	ERP review	Supervisors	4/2024

Scheduled Drills:

Frequency	Description	Attendees	Date Held
EXAMPLE Annual	Distribution Contamination Tabletop	Emergency response personnel, County OEM, Local PD, DEP	6/15/17

Safety Materials:

Type	Location
Toxic material detection and testing supplies	
Emergency food and water supplies	
Emergency PPE (note what PPE are present at each location)	Gloves and eye protection
Other equipment (note what is present at each location)	

Section 2 - System Description
a. System Overview

Population Served: 27,000
Each Municipality Served: Monroe TWP
Each County Served: Gloucester
Owned by/Managed by: Monroe MUA

(Description of system, noting source types, if bulk purchase only, various pressure gradients, etc.)

All the Monroe MUA wells are groundwater wells. The MUA imports water from New Jersey American Water through the Borough of Glassboro.

Section 2 – System Description
b. Property Protection

This section details procedures for protecting and securing water system facilities, equipment, and vital records. Additionally, this section provides information for water system personnel regarding restricted access protocols.

Protection and Security of Facilities, Equipment, and Vital Records

Facilities: All gates to Plant, Wells, Tanks, Towers and lift stations require an automatic gate opener. Gate is closed and locked when unattended.

Maps: Stored in MUA Plant and Operations office. Vital Records: Stored at Plant and Main St office.

Restricted areas (chemical rooms, electrical closets, etc.) may only be accessed by Monroe MUA personnel only.

Tours must be arranged via email to: info@monroemuanj.com

Section 2 - System Description
c. Primary Components

In this section, systems should list all the components that are necessary to maintain effective operation. The Department considers effective operation as a system's ability to meet average daily demand while providing sufficient volume and pressure for fire protection, where applicable, while meeting drinking water quality standards.

Wells

Well (name)	Depth/location	Available Yield	Treatment Requirements/associated Treatment Plant
Well 5	160'/ Water St	720,000 gpd	Cal hypo tabs, GAC, caustic, blended phosphate, air stripper
Well 6	144'/ Lake Ave	576,000 gpd	Cal hypo tabs, GAC, caustic, blended phosphate, air stripper
Well 7	143'/Corkery Ln	1,152,000 gpd	Cal hypo tabs, GAC, caustic, blended phosphate, air stripper
Well 8	146'/BHP	576,000 gpd	Cal hypo tabs, GAC, caustic, blended phosphate, air stripper
Well 9	144'/Tuckahoe Rd	432,000 gpd	Cal hypo tabs, caustic, blended phosphate
Well 10	138'/Tuckahoe Rd	432,000 gpd	Cal hypo tabs, caustic, blended phosphate
Well 12	355'/Coles Mill	612,000 gpd	Cal hypo tabs
Well 13	407'/Jackson Rd	325,440 gpd	Cal hypo tabs

Intakes

Intake (name)	Location	Available Yield	Treatment Requirements/associated Treatment Plant
Interconnect	Glassboro Rd	500,000 gpd	

Treatment plants

Treatment Plant (name)	Location	Available Yield	Treatment Train

Storage & Distribution system - Tanks, primary mains and pumping stations

Location	Area Served	Comments
Glassboro Rd	NW	
Tuckahoe Rd	NW	
S. BHP	SE	

Industry Chemical Handling Facilities

Facility Name	Location	Distance	Chemical and Exposure Pathway

Chemical Storage Tanks

Facility Name	Location	Distance	Chemical and Exposure Pathway

Other Key Facilities

Location	Function	Comments

Section 2 - System Description
d. Available Water Supply Interconnections

Purchases:

Provider Name (PWSID #) and Contact Info	Location(s)	Main Size and capacity	Contract Type and Limitations	Service Area / Availability / Response Time
EXAMPLE Uptown water (NJ0012123)	Corner of Main St. & Rt 2	8”	Daily X gallons, may increase to XX gallons for emergencies; (contract	Serves lower city zone, can also serve parts of upper zone in emergencies

			attached as Appendix X)	
Glassboro NJ0806001	Glassboro Rd	12”	500,000 gpd	NW section

Sales:

Provider Name (PWSID #) and Contact Info	Location(s)	Main Size and capacity	Contract Type and Limitations	Service Area / Availability / Response Time
EXAMPLE Uptown water (NJ0012123)	Corner of Main St. & Rt 2	8”	Daily X gallons, may increase to XX gallons for emergencies (contract attached as Appendix X)	One of 2 interconnections, Permanent supply, can provide entire demand via 2nd one if compromised.

Emergency Interconnection Agreements*

*Attach copies of all emergency interconnection **written agreements** required pursuant to the Water Supply Management Act Rules under N.J.A.C. 7:19-6.8 and 7:19-6.9.

- All applicable purveyors must maintain written and legal contractual agreements.

Provider Name (PWSID #) and Contact Info	Location(s)	Main Size and capacity	Contract Type and Limitations	Service Area / Availability / Response Time
EXAMPLE Uptown water (NJ0012123)	Corner of Main St. & Rt 2	8”	Daily X gallons, may increase to XX gallons for emergencies; (contract	Serves lower city zone, can also serve parts of upper zone in emergencies

			attached as Appendix X)	
Clayton NJ0801001		12”		NW section
Washington TWP NJ0818004		12”		NE section

Section 2 - System Description
e. Seasonal Sources/Backup Sources/Unapproved Sources*

*May be used in extreme emergency situations with temporary approvals

Source Type	Source Location	Available Yield	Treatment Requirements

Section 2 - System Description
f. Bulk Water Haulers/Bottled Water Source

The following companies have been contracted to supply tanker service and/or bottled water in an emergency:

Company Name	Phone Number	Contract Number	Available Quantity	Additional Details *(How delivered/lead time)*

Section 3 - Water System Contingencies & Priorities
a. Water Usage

This section establishes water usage within our service area and assigns the prioritization and best use of our water system resources during an emergency to maintain effective operation*. Using ***high***, ***medium*** or ***low***, the chart below establishes the priority given to each use, our assessment of the water needed, and the method of sustaining the use.

System Capacity: _____9_____ million gallons per day (MGD)
% purchased: _____

Demand (MGD)	2020	2021	2022
Average Daily	2.49	2.47	2.47
Maximum Daily	4.8	4.8	4.8
Peak Daily	3.77	3.26	3.58

*The Department considers effective operation as a system's ability to meet average daily demand while providing sufficient volume and pressure for fire protection, where applicable, while meeting drinking water quality standards.

Prioritization

Use Category	Priority (High, Medium, Low)	Daily Water Demand (MGD)	Method of Sustaining Use / Emergency Contingencies Beyond Standard Response
Fire Protection	H		
Sanitary	H		
Industrial/Commercial	M		
Potable (cooking, drinking, hygiene)	H		
Sensitive Populations	M		
EXAMPLE Hospitals	HIGH	.06 MGD	Direct supply by tankers if necessary
Other (i.e. Bulk Sales)			

Section 3 - Water System Contingencies & Priorities
b. Primary Component Emergency Provisions

This section details contingencies for sustaining primary components:

Primary Component	Emergency Contingency Procedures
Treatment	
Pumping	
Distribution	
EXAMPLE: Treatment	Reduce treatment train to chlorination only to conserve auxiliary power. Switch to secondary treatment plant if necessary.

Section 3 – Water System Contingencies & Prioritization
c. Water Restrictions

This section establishes the adopted water use restrictions to be implemented by our system during a non-drought water emergency. Phased water use restrictions at a minimum should model the Water Use Restrictions set forth in the Water Allocation rules, specifically N.J.A.C. 7:19-13.3 - 6.

PHASE I Restrictions (available water supply levels determined to be below normal)

PHASE II Restrictions (substantial threat to the public health and welfare)

PHASE III Restrictions (further rationing required)

PHASE IV Restrictions (disaster stage)

Section 3 – Water System Contingencies & Prioritization
d. Ordinances

Local Ordinances that address Water Use Restrictions:

Lawn sprinklers are permitted for odd/even days only

Section 4 – Resource Inventory
a. Physical Plant Resources

This section is intended to serve as a quick reference of the inventory of available resources (e.g. generators, equipment, and supplies) either maintained on-site or readily available off-site (i.e. neighboring water system). This section also provides contact information for vendors who provide emergency services and/or parts, equipment, chemicals.

Auxiliary Power Sources

The auxiliary power capabilities listed below provide adequate auxiliary power to sustain primary components (identified in Section 2) to ensure satisfactory treatment and delivery of potable water as noted in NJDEP's Auxiliary Power Guidance and Best Practices Document.

FIXED Auxiliary Power Sources

Location	**Powers:** (*facility and/or equipment*)	**Details** *(Type/Capacity/Fuel & Rate of Consumption)*	**Specific Instructions** *(Location of manual/exercise schedule/etc.)*	**Inventoried?** (EGI)
Well 5	Facility/equipment	Onan/150kw/Nat Gas	MUA Plant	Yes
Well 6	Facility/equipment	Onan/150kw/diesel	MUA Plant	Yes
Well 7	Facility/equipment	Spectrum/450kw/diesel	MUA Plant	Yes
Well 8	Facility/equipment	Onan/125kw/diesel	MUA Plant	Yes
Well 9	Facility/equipment	Onan/150kw/Nat Gas	MUA Plant	Yes
Well 9.5	Facility/equipment	Cummins/150kw/diesel	MUA Plant	Yes
Well 10	Facility/equipment	Onan/70kw/Nat Gas	MUA Plant	Yes
Well 12	Facility/equipment	Cummins/500kw/diesel	MUA Plant	Yes
Tuckahoe storage tank	Facility/equipment	Onan/150kw/diesel	MUA Plant	Yes
BHP tank	Facility/equipment	Onan/150kw/diesel	MUA Plant	Yes
322 tank	Facility/equipment	Cummins/300kw/diesel	MUA Plant	Yes

PORTABLE Auxiliary Power Sources

Location	**Capable of Powering:** (*facility and/or equipment*)	**Details** *(Type/Capacity/Fuel & Rate of Consumption)*	**Specific Instructions** *(Location of manual/exercise schedule/etc.)*	**Inventoried?** (EGI)
MUA plant	Facility/equipment	Generac/100kw/diesel	MUA Plant	Yes
MUA Plant	Facility/equipment	Generac/25kw/diesel	MUA Plant	Yes
MUA Plant	Facility/equipment	Generac/25kw/diesel	MUA Plant	Yes
MUA Plant	Facility/equipment	Onan/125kw/diesel	MUA Plant	Yes
MUA Plant	Facility/equipment	Onan/85kw/gas	MUA Plant	Yes
MUA Plant	Facility/equipment	Onan/350kw/diesel	MUA Plant	Yes

* Auxiliary power sources should be inventoried to determine voltage, phase configuration, horsepower/amperage and other requirements. Use of EPA's Generator Assessment Form (or a similar form) is encouraged (See Appendix B).

Auxiliary Fuel Storage

Type	Tank Capacity	Location
Fuel	1,000 gallons	MUA Plant
Diesel	1,000 gallons	MUA Plant

Pumping Equipment /Spare Pump Parts

Type/Manufacturer	Service Capabilities	Location

Distribution Components

Part	Location

Chemicals Supplies

Chemical	Location
Chlorine Tabs	All wells
Caustic	Well 5,6,7,8,9.5
SLI-6134	Well 5,6,7,8

Spare Parts

Part	Location

Section 4 – Resource Inventory
b. Contact Information for Equipment Repair, Supplies, & Services

Organization	Company Name/Contact/ Contract Information	Phone (day)	Phone (24/7)
Electrician	M & M Electric/Greg McClear	856-582-7440	
Plumber	MVP Plumbing/Steve Dimeko	856-404-1765	
Pump Installer	AC Schultes/Rick Hill	856-845-5656	
Excavator/Backhoe Operator			
Equipment Rental or Cooperative (e.g. heavy equipment)	United Rentals	856-740-1400	
Equipment Rental (i.e. Chlorinators)			
Equipment Repair	United Rentals	856-740-1400	
SCADA Repair	Complete Control Services/Mimi Helms	609-593-6219	
Pump Supplier	AC Schultes	856-845-5656	
Well Driller	AC Schultes	856-845-5656	
Pipe Supplier	Catarina Supply/Sean Geary	856-728-0171	
Analytical Laboratory(s)	Garden State Labs/Cindy Brandecker	800-273-8901	
Chemical Supplier(s)			

Primary Fuel Supplier(s) Alternate Fuel Supply	Pedroni Fuel Plugfelder Oil	856-691-4855	

Section 4 – Resource Inventory
c. Documentation/Guidance

This section lists documents that establish the daily operational protocols, including routine operation and management procedures, and operational monitoring requirements. In the event of an emergency, any person so designated should be able to implement the necessary procedures to ensure continuity of operations.

Item	Location
EXAMPLE: Generator start up manuals	• Treatment Plant main office, File #2 • Administration Building, 2nd floor, Directors office, Docs. cabinet
Daily Operator Reports	MUA Plant/Operations Office
Technical Manuals	Treatment facilities, lift stations, plant
Business Continuity Plan (Essential Functions/Resources)	Main St office
Lockout-Tagout Manual	MMUA Plant
Other	

Section 4 – Resource Inventory
d. Water Use Advisories/Public Notices

Templates for Water Use Advisories: (Include here or reference where they may be found)

Operations Office/Main St office

Distribution Methods: (Protocols for Email, newspaper, door to door, etc.)

Operations Office/Main St office

Section 5 – Emergency Situations
a. Vulnerability/Risk Assessment

The following emergency incidents that are applicable should be addressed. Please indicate those that are applicable:

A. [x] Floods/Hurricanes
B. [x] Power Outages
C. [ ] Pollution Episodes
D. [ ] Earthquakes
E. [ ] Major Distribution System Failure
F. [ ] Major Source Supply Failure
G. [ ] Major Treatment System Failure
H. [ ] Major SCADA or Other Automated Control Failure (capacity of manual operations)
I. [x] Internal Chemical Accidents
J. [ ] External Chemical Accidents (truck, rail, or cargo, spill or accident)
K. [ ] Explosion Affecting System Infrastructure
L. [ ] Job Actions (e.g. strikes, walkouts, etc.)
M. [ ] Insider Threat (e.g. disgruntled employee, contractor, etc.)
N. [x] Terrorist Threat (e.g. intentional sabotage/contamination, cyber-attacks)
O. [ ] Harmful Algal Blooms **(mandatory for systems with any surface water source)**

Impacts from the above listed incidents should be addressed regarding each of the following applicable components. Please indicate those that are applicable:

A. [x] Sources
B. [x] Treatment System
C. [x] Pumping System
D. [x] Transmission/Distribution System
E. [x] Personnel
F. [ ] Power Supply
G. [x] Materials and Supplies
H. [ ] Communications

The following tools may be used when preparing Emergency Action Plans (EAPs, Section 5-c.):

Vulnerability/Risk Assessment Tools

A vulnerability assessment is the first necessary step in emergency planning. As per N.J.A.C. 7:19-11.2, and America's Water Infrastructure Act of 2018 (sec. 2013) community water systems are required to conduct a Vulnerability Assessments, and Risk and Resiliency Assessments (VA & RA, respectively). As the VA/RA reports are considered highly confidential, the actual reports need not be included here, but the results must be addressed in the Emergency Action Plans in Section 5-c.

Vulnerability/Risk Assessments conducted:

Date	Method utilized (e.g. VSAT, PARRE or WHEAT)	Location of full report	Comments
EXAMPLE: 4/1/2020	WHEAT	Director's office, locked cabinet	Included new storage tank

Threat Response/Consequence Management Tools

When planning the appropriate response to threat incidents, as opposed to incidents caused by weather or accidents, there are additional factors to be considered. The main part of the response may fit an existing EAP, such as "power outage" but due to the criminal nature of the cause additional steps may be necessary. Events caused by malevolent acts are a crime and therefore dictate crime scene preservation, evidence protection measures, and appropriate investigative techniques such as chain of custody for sampling activities and photographic documentation.

This section lists resources used for establishing field and/or crisis protocols for performing threat evaluation, site characterization, and response actions.

EXAMPLE RESOURCES:

- *Response Protocol Toolbox: Planning for and Responding to Drinking Water Contamination Threats and Incidents – Response Guidelines,* Interim Final (EPA, August 2004)
    - *Threat Evaluation Worksheet*
    - *Security Incident Report Form*
    - *Phone Threat Report Form*
    - *Public Health Response Action Worksheet*
- A Water Security Handbook: Planning for and Responding to Drinking Water Contamination Threats and Incidents (EPA Publication No. 817-B-06-001 www.epa.gov/watersecurity April, 2006)

In the event of a threat, either credible or not, these steps will be taken in addition to the protocol in the appropriate EAP:

EXAMPLE:

- Immediate notification to Local PD. DEP Hotline notification indicating the need for immediate consultation, Notification to the OHSP Suspicious Activity call center (866-472-3365)
- Access restricted to all personnel unless immediate need for repairs.
- Etc.

Section 5 – Emergency Situations
b. Emergency Water Sampling Plan

During an emergency, as part of incident characterization, sample collection and analyses may be required to ascertain the extent of contamination and/or safety of the water supply. To ensure the timely analyses of samples, sample collection and analytical services will follow the protocol identified below:

EXAMPLE:	Sample collection kits are available in the main office for the following contaminants:. Emergency 24/7 laboratory services are available through:

Section 5 – Emergency Situations
c. Emergency Action Plans

An Emergency Action Plan (EAP) addresses that potential impacts identified in a vulnerability assessment by establishing contingencies to maintain and/or return swiftly to effective operations despite impacts. An EAP should be developed for **EACH** emergency situation considered in the vulnerability/risk assessment, and to address their potential impact on the system components (see Section 5c above). Each EAP should include/address: Assessments, Communications, Notifications, and Alternative Contingency Measures.

The following general actions will be followed for all emergency situations:

- For forecast events, take pre-emptive actions (i.e. as those recommended on the pre-event preparedness checklist typically distributed by the Department prior to a forecast event and available here: http://www.nj.gov/dep/watersupply/pdf/checklist_hurricane.pdf)
- Take or direct any **immediate** response measures that are obviously needed to reduce risk to the public (see specific emergency response action below).
- Notify the water system administration and applicable government agencies.
- Determine and implement appropriate corrective actions to reduce and eliminate the effects of the emergency.
- Inform mayors and municipal clerks of all Tier 1 Public Notice events within 1 hour of becoming aware, and again as the status changes.
- Inform consumers of the emergency situation as soon as possible, and again as the status changes.

Emergency situation: EXAMPLE: Power Outages

Recovery Time Assessment: _____

- **Assessment**: Power outages may occur for various reasons including large scale storms, accidents, power system failures, etc. On site generators are in place to run all primary components and will switch on automatically. Fuel reserves are maintained to run generators for 24 hours. Water system is deemed a priority restoration customer.

- **Immediate Actions**: Assess expected length of time outage is expected to last. If beyond 24 hours contact vendors to arrange for fuel delivery.

- **Notifications:** Power company – alert them of outage.
  Customers – distribute water conservation notices and/or advisories as necessary via:
  DEP –if there is a potential for loss of service

- **Follow up:** Once power is restored evaluate fuel consumption and remaining levels. Service generator as necessary.

- **Review**: Review actions taken and determine if any changes need to be made to protocols and plans.

Emergency situation: _____

Recovery Time Assessment: _____

Action Plan:

- **Assessment:**
- **Immediate Actions**:
- **Notifications:**
- **Follow up:**
- **Review:**

Emergency situation: _____

Recovery Time Assessment: _____

Action Plan:

- **Assessment:**
- **Immediate Actions**:
- **Notifications:**
- **Follow up:**
- **Review:**

Continue to add EAPs as necessary

Section 5 – Emergency Situations
d. Preliminary Damage Assessment

This Preliminary Damage Assessment Report will be used after an emergency to quickly assess the extent of the damage and the need for repair, replacement or abandoning of facilities. Note: For an emergency incident involving extensive damage to a critical facility or large portion of the system's infrastructure the water system must submit a copy of the Water Supply Damage Assessment Report available on the website under Guidance and Resources at http://www.nj.gov/dep/watersupply/emergency.html

Wells	Yes	No	N/A
Physical damage	o	o	o
Pump or motor failure	o	o	o
Power source operating properly	o	o	o
Test for water quality contamination	o	o	o

Treatment Facilities	Yes	No	N/A
Physical damage	o	o	o
Equipment operating properly	o	o	o
Power source operating properly	o	o	o
Chemical spills or release	o	o	o

Water Storage Facilities	Yes	No	N/A
Physical damage	o	o	o
Leaks	o	o	o
Buckling	o	o	o
Damage to inlet/outlet pipes	o	o	o

Distribution System	Yes	No	N/A
Physical damage	o	o	o
Leaks	o	o	o
Main breaks	o	o	o
Pressure loss	o	o	o
Cross connection concerns	o	o	o
Interconnections compromised	o	o	o

Other system damage (e.g. reservoirs, vehicles, etc.) _____

Description of Damage: _____

Estimated Cost to Repair Damage: _____

Estimated Time to Repair and Restoration of Service: _____

Section 6 – Mitigation Actions

List any mitigation procedures or projects implemented at your utility, such as raising facilities and controls or constructing berms to protect against flood damage.

Type	Location	Comments
Water intake relocation	*Intake 1*	*This intake was moved further offshore and deeper to better avoid surface spills and low river levels during drought*
Watertight doors	*Treatment plant*	*These doors were installed to help ensure floodwaters cannot enter the treatment building and damage control systems*
Earthquake	*All facilities*	*Anchored equipment (e.g., computers, bookshelves) as well as laboratory equipment and chemical and fuel tanks*

Section 7 – Detection Strategies

This section contains strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

List the detection strategies and methods your utility uses to aid in the detection of malevolent acts or natural hazards. Also list the corresponding procedure to be used if the threat is detected.

Detection Strategies		
Threat	**Detection Method**	**Procedure**
Unauthorized entry	• *Alarm from intrusion detection system*	*Call 911*
Source water contamination	• *National Response Center notifications* • *Notification from 911 for releases resulting from transportation accidents*	*Source Water Contamination Incident Response Plan*
Distribution system contamination	• *Customer complaint surveillance* • *Public health surveillance*	*Distribution System Contamination Response Procedure*
Cyber intrusion	• *Automated IT and operation technology (OT) system intrusion detection monitoring* • *Notification from utility staff*	*Cyber Incident Action Checklist*
Hazardous chemical release	• *Chlorine gas in air monitors*	*Call fire department*
Hurricane	• *Weather Service alerts*	*Hurricane Incident Action Checklist*
Flood	• *Notification from Army Corp*	*Flood Incident Action Checklist*
Power outage	• *Notification from energy provider* • *Alarm from line power sensor*	*Generator Start-up Checklist*
Other		
Other		

Section 8 – Emergency Response Evaluation

At the conclusion of an emergency event, the Emergency Response Team should meet and prepare an *Emergency Response Evaluation Report* to evaluate the timeliness and effectiveness of the Emergency Response Plan. Communication, critical decision-making, available resources, local emergency response coordination, and the integration of external resources should be evaluated. The Emergency Response Plan should be revised as accordingly.

The *Emergency Response Evaluation Report* should address the following:

Brief description of the emergency situation (including causes, chronology of events, damages and impact):

Assessment of Operations:

1. Was the Incident Commander notified timely of the emergency incident?
2. Was the Emergency Response Team assembled in a timely manner?
3. Were the appropriate external notifications made in a timely manner?
4. Were there any difficulties in reaching the appropriate internal (team members)/external contacts?
5. Were the communication resources sufficient or are additional communication resources need to be acquired?
6. Does the communication plan need to be revised?
7. Was the chain-of-command clear to all individuals involved?
8. Was incoming information disseminated to the appropriate individuals in an efficient manner?
9. Were sufficient in-house resources available for use? If not, what additional resources are necessary to facilitate a quicker response time and/or lessen the impact of the emergency situation?
10. Were outside services (e.g. bulk water suppliers, laboratory services, etc.) deployed in an efficient manner and according to the timeframes specified within their respective contracts?
11. Did the Emergency Response Team and other responding staff act in a safe manner, following all safety protocols and procedures?
12. Should staff be provided with additional training to ensure their knowledge of the safety protocols?

13. Does the emergency response plan require revisions?

Description of recommendations:

Appendix A

Emergency Response Training
National Incident Management System & Incident Command System

Incident Command System (ICS) training is an important component of compliance with the National Incident Management System (NIMS) and the ability to execute and coordinate the functions of this Emergency Response Plan, integrate with other first responders within an expanding ICS structure and be eligible for federal homeland security/preparedness funding.

On February 28, 2003, Homeland Security Presidential Directive-5 was established – Bush. HSPD-5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private-sector, and non-governmental organizations to work together during domestic incidents.

August of 2005, Acting Governor Cody signed Executive Order #50 mandating Incident Command Training for certain response and recovery workers to include water utility workers that are "remotely involved in an emergency". For full text of this Executive Order, refer to http://www.state.nj.us/infobank/circular/eoc50.htm .

This Executive Order required the following:

- All first responders to complete, ICS 100.
- All persons with response, command or response policy, to complete IS 700.
- All supervisors to complete, ICS 200.
- All command personnel to complete ICS 300 & 400.

Individuals needing NIMS ICS training would be those who are involved in the critical mission areas surrounding the incident response, such as protecting against the incident, preventing the incident or recovering from the incident.

Examples of those individuals needing NIMS ICS training include (but are not limited to): Personnel directed to coordinate the protection, prevention, response, and recovery for all-hazards incidents.

NIMS/ICS Training Requirements
Decision Tree

Question No. 1 Are you:

- □ □remotely involved with any kind of facility emergency plan or duties or, and/or,
- □□ responding as part of or in support of an emergency operation at or off your facility,

No - **No Training Required**

YES – Proceed to Question no. 2

Question No. 2 Are you:

- □□ responsible for participating in a general emergency or ICS function as part of your responsibilities; and/or,
- □□ responding to an incident outside of your normal work environment; and/or,
- □□ provide support to or operate at an incident, and/or
- □□ Emergency Operations Center support

No – **Introductory Level Training Required (ICS 100)**

Yes – Proceed to Question No. 3

Question No. 3 Are you:

- □□ expected or required to act in a supervisory function while participating in a general emergency or ICS function; and/or,
- □ □supervising employees who are responding to an incident; and/or,
- □ □supervising employees who provide support to or operate at an incident and/or
- □□ a county or municipal OEM coordinator

No - **Basic Level Training Required (ICS 200 and IS 700)**

Yes - Proceed to Question No. 4

Question No. 4 Are you:

- □□ expected or required to command or serve in any of the General or Command Staff positions while participating in a general emergency or ICS function at your facility; and/or,
- □□ commanding employees or serving in any of the General or Command Staff positions at an incident outside the facility; and/or,
- □□ required to serve in a unified command structure at an incident,

No – **Intermediate Level Training Required (ICS 300 IS 800)**

Yes – **Advanced Level Training Required(ICS 400)**

IS-700 NIMS AN INTRODUCTION

- This course introduces the National Incident Management System and explains the purpose, principles, key components and benefits of NIMS.
- This course is designed to be given after the ICS 100 introductory program.
- This course takes approximately three hours to complete on-line. It is recommended for all emergency management personnel and key decision makers and supervisors that will be involved in incident management. It can be taken online at: http://training.fema.gov/EMIWeb/IS
- Additional information about ICS training can be found at: www.fema.gov
- Information about NIMS can be found at: www.fema.gov/nims/

IS-800 NATIONAL RESPONSE PLAN, AN INTRODUCTION

- This course introduces participants to the concepts, principles and purpose of the National Response Framework.
- This course reviews the response doctrine established by the National Response Framework and defines roles and responsibilities of entities as specified in the National Response Framework.
- This course identifies actions that support national response, reviews the response organizations used for multiagency coordination and describes how planning relates to national preparedness.
- Additional information about the National Response Framework can be found at www.fema.gov/nrf
- This course is intended for government executives, private-sector and nongovernmental organization (NGO) leaders, and emergency management practitioners. This includes senior elected and appointed leaders, such as Federal department or agency heads, State Governors, mayors, tribal leaders, and city or county officials – those who have a responsibility to provide for effective response.

Incident Command System (ICS) training is offered at four course levels:

- ICS 100-Introduction to ICS
- ICS 200-Basic ICS
- ICS 300-Intermediate ICS
- ICS 400-Advanced ICS
-

The 100 and 200 level courses are available in a Web-based independent study format and as classroom delivered courses.

The 300 and 400 level courses are classroom based multi-discipline or multi-jurisdiction courses intended for persons with supervisory responsibilities, such as the incident commander or planning section chief.

On-line Training is available at: http://nims.nj.gov/ics_training.html

Monroe Municipal Utilities Authority
Welding/Cutting/Brazing Program

Date Issued: December 2004
Reviewed: June 2006
Revised: November 2008
Reviewed: May 2014
Reviewed: February 2018
Reviewed: 6/23/2025

Purpose
To provide safety measures for the usage, handling and storing of equipment designed for welding, cutting and brazing, a.k.a. (Hot work)

Training
Any employee involved in the hot work process should be made aware of the potential hazards and dangers associated with welding, cutting and brazing. **All employees must be made aware that welding is in progress inside the welding shop.** The pole barn door will be shit and a "Red Light" will be lit, indicating that welding is in progress. This light will only activate when the welder is on.

Responsibilities
All welding must be done in areas designated by the Authority. Employees responsible for doing hot work must take the necessary precautions to protect themselves and others from the hazards associated with it. An area inspection should be conducted to ensure that no combustible or flammable material are present that could pose an immediate danger threat to an employee. This employee is also responsible for closing the welding shop doors and performing a visible inspection. (Red Indicator Light) before work is started.

Standard Work Procedures
- All hot work must be done in designated areas. Any work performed outside of a designated area requires a hot work permit.
- An area inspection should be conducted prior, to ensure that all flammable and combustible liquids have been removed from the work area.
- Make sure that the right fire extinguisher is readily available for the hot work being performed.
- To protect against fire or explosion, never open a cylinder around an open flame. If possible, close the valve to eliminate against small fires.
- If fire becomes too large, evacuate the area and call 911.

Gas Welding/Cutting/Brazing
- Never use compressed gases to clean off clothing
- All welding areas must be equipped with an ABC and Class D Fire extinguishers
- All cylinders should be stored in an upright position and secured
- Oxygen cylinders must be stored at least 20 feet from Acetylene or other flammable material
- Always keep the protective valve cap on when the bottle is not being used
- All leaking cylinders must be removed from the building immediately and placed outside away from any ignition source.
- Keep all sparks, flames, currents and excessive heat away from cylinders
- Oxygen cylinders should not be emptied below 25-50 psig
- Acetylene may not exceed the pressure of 15 psig

- Defective cylinders should not be accepted
- All cylinders must be handled with care
- Make sure that all fittings match. Don't cross thread or force fittings that don't fit
- Always crack the valve on the cylinder to remove dust and dirt
- Regulators should be easily read. Replace any gauge that is broken or not working properly
- Close the cylinder valve and release excess gas from the regulator before replacing the regulator
- Check all hoses and fittings regularly for leaks or wear
- Keep all cylinders and welders out of confined space areas
- Keep the torch and cylinder valves closed when not being used
- Never use oily or dirty rags to clean oxygen cylinders
- Always bleed pressure off the regulators when finished
- Use cleaning tools to clean torches
- Ignite torches by friction lighters only

Electric Arc Welding

- Electrodes must be disconnected when welding is finished
- Wear #2 or #3 shade face shield to protect from arc flash
- Never change electrodes with bare heads, wet gloves or on wet floors
- Accidental contact could lead to a bad shock or even death
- Any broken or worn equipment must be locked and tagged until it is replaced
- The welding cable should never get looped or tangled around your body
- Rubber gloves should be worn under the welding gloves when working in damp locations

Personal Protective Equipment Required

- Face shield with the appropriate shaded lens for welding or cutting
- Ear plugs in loud areas
- Fire resistant gloves, aprons, leggings (leather)
- Shaded goggles must be used during all cutting and welding operations
- Steel toe boots must be worn.

Ladder and Scaffolding Written Safety Program for the Monroe Municipal Utilities Authority

Written: April 2010
Reviewed: May 2014
Reviewed: February 2018
Reviewed: 6/23/2025

Purpose
The purpose of this program is to provide a minimum guideline for the usage and storage of ladders and scaffolding.

Training
Training will be provided to all employees in the proper usage, maintenance and storage of ladders and scaffolding.

Responsibilities
The Authority will provide all ladder types suitable for working conditions. Each ladder and scaffolding must be inspected before and after every use, for any defects that may have occurred during a working day. All ladders must be in compliance with OSHA standards and maintained in accordance with the manufacturer's specifications.

Standard Practices

- All ladders must contain the appropriate American National Standard Institute (ANSI) warning labels that identify weight and height limitations.
- Choose the correct ladder for the job. Extension ladders should be long enough to extend at least 4 rungs above any elevated surfaces that need to be reached.
- Never leave an erect ladder unattended.
- Do not use the top 3 rungs of a straight ladder or the top 2 steps of a step ladder to stand.
- Always face the ladder when climbing or descending. Follow the 3 point climbing method, 1 hand 2 feet or 2 hands and 1 foot.
- Watch overhead power lines when using extension or straight ladders. Use a nonconductive material ladder such as fiberglass if working around any source of electricity.
- Inspect rungs, cleats, feet, nuts, bolts and welds. Any ladder that is damaged or cracked has to be tagged out of service and reported to your crew leader. Under no circumstance should a defective ladder be used.
- Store ladders where they can be kept out of the weather.
- Never move a ladder when someone is on it!
- A ladder must be placed on a solid flat smooth surface before climbing. The bottom of the ladder should be ¼ of its length away from the wall.
- Do not overreach or hang off a ladder. This could cause the ladder to slide of kick out causing it to fall.
- Never try and shift a ladder when you are on it. Climb down and reposition it to where you need it.
- Do not place a ladder near a door unless it is unlocked, guarded or has a warning sign on it.
- Tools on a ladder should be carried by a tool pouch or placed in a bucket to be raised up or down. Under no circumstances should another employee stand under a ladder

when tools are being used. Hard hats must be worn when tools are going to be used and the ladder is being footed.

- Do not lean a stepladder up against a wall to use as a straight ladder. Choose the correct ladder for the job.
- Do not lean a straight ladder against any movable objects or walls.
- Try tying off a ladder if possible to prevent the ladder from slipping.

Scaffolding

- Install guardrails or toe boards on all open sides and ends of any platform more than 10 feet above the ground to prevent accidental falls.
- Guardrails should be 2 x 4, and at least 42 inches high with a center rail. Supports shall be at intervals not to exceed 8 feet. Toe boards shall be at a minimum of 4 inches high.
- Scaffolds and their components shall be capable of supporting at least 4 times the maximum intended load.
- All planking of platforms shall be overlapped (minimum 12 inches), or secured from movement.
- To ensure a proper footing, extend the scaffold planks over their end supports not less than 6 inches or more than a foot.
- Suspend 2 point suspension scaffolds with wire, synthetic or fiber ropes, capable of supporting at least 6 times the rated load. All other components shall be capable of supporting at least 4 times the rated load. 2 point suspension scaffold platforms shall not be less than 20 inches and no more than 36 inches wide overall.
- On suspension scaffolds designed for a working load of 750 pounds, no more than 2 employees at one time.
- Each employee must have an approved safety harness attached to a lifeline. Lanyards can be worn as well when working on anything over 6 feet.
- Attach the lifeline to a secure section of a structure and not to the scaffold or its supports. Rig extra lines if needed that will suspend an employee in case of a fall.

Monroe Municipal Utilities Authority Hazardous Energy Control Lockout/Tagout and Electrical Safety Program

Date Issued: November 2004
Revised: November 2008
Revised: May 2014
Reviewed: February 2018
Revised: January 2020
Reviewed: 6/23/2025

Authorized Electrical Employees

Dan Suarez
Ralph Manfredi

Lockout/Tagout

Purpose
To establish a written guideline to protect employees repairing equipment from the hazards of reenergization or start-ups of machines and equipment.

Definitions
Qualified Employee – a person who can demonstrate through experience and training the ability to recognize the dangers of hazardous energy and means for controlling it.
Authorized Employee – a person who locks and tags out equipment in order to repair or service equipment or machinery.
Lockout/Tagout – Deenergizing or neutralizing energy sources by using the following methods:

- Disconnecting leads or power sources
- Blanking or bleeding
- Securing and bracing
- Locking out

Different forms of energy sources

- Electrical (capacitors)
- Kinetic (wheels, augers, pulleys)
- Stored (hydraulic, pneumatic, springs)

Responsibilities
All equipment needing repair must be handled by a qualified person. Training is provided to ensure that all employees affected have a basic understanding of why machinery and other equipment may pose a harmful threat if all energy sources are not isolated properly.

Employees are trained to know that any equipment that is locked and tagged may not be tampered with unless he/she is with a qualified person. Qualified employees are required to fill out the Authority's Lock/Tagout hazardous energy control form before performing a task. They must follow proper LOTO procedures, such as identifying and using all energy isolating devices and ensuring that all equipment is maintained and serviced in accordance with the manufacturer's specifications.

Training
The Authority will provide the necessary training needed to comply with the NJAC 12:100-11.1 safety and health standards. Hands on and classroom are provided to ensure that all employees understand energy control procedures and maintain the knowledge and skills required to identify the dangers of hazardous energy. Retraining will be provided to any employees that are unsure or unfamiliar with the Authority's guidelines on Lockout/Tagout.

Standard Procedures
The Authority's Lockout/Tagout hazardous control form must be completed identifying all energy sources (primary and secondary)

- Notify all employees when equipment is locked and tagged and provide the reason for the shutdown.

- The Authority will designate a competent employee(s) to coordinate a lockout/tagout procedure when equipment requires more than 1 lock and tag. That employee must place his/her own personal lock and tag on the equipment that is to be worked on.

- All energy control devices must be used as follows:
  A. Lockout devices must be able to prevent the startup and reenergizing of equipment. They are to be used in isolating a device in a "safe" or "off" position, making startup impossible.
  B. Tagout devices are used to provide information regarding the status of equipment, personnel working on it and a contact number.
  C. If a tag cannot be attached to the energy isolating device, it must be placed as close to the device as possible so it still prohibits the start up of equipment.

- Try starting equipment to ensure that all sources of energy have been deactivated. **Make sure that all switches are placed back in the off or neutral position.**

- Stored energy such as (springs, fly wheels, pulleys, hydraulic lifts, pneumatic, steam, water etc.) must be dissipated or restrained by means of blocking or bleeding of systems.

- Before locks and tags are removed from equipment, a thorough inspection must be performed involving the following:
  A. Make sure that all parts are back and nothing was left off
  B. The work area is clean and nothing was left behind

- A lock and tag can only be removed by the individual who applied it except in the following cases: the individual is not on site, there is no way to contact him/her, and the authorization has been given by the immediate supervisor to remove them.

Note: If an individuals lock has been cut for the above reasons, he must be notified immediately upon arrival at the site.

- Outside contractors performing work on Authority property must abide by the guidelines and provisions of this program.

- The Authority will oversee that all lock and tag procedures are properly followed.

- All employees will be made aware of any equipment that has been locked and tagged.

Electrical Safety

Purpose
To establish written guidelines to protect all employees working on or near energized/deenergized machinery. It's the intention of the Authority to set forth a standard to ensure that all affected employees are aware of the hidden dangers of electricity in their workplace.

Responsibilities
All employees working on or near equipment that is energized/deenergized must follow safe work practices to prevent against the dangers of electrical shock. It is the responsibility of the Qualified Person to ensure all machinery that is locked and tagged remains at a zero energy state to prevent against accidental shock.

Training
This written program is to ensure that all employees have a basic understanding of the hazards of electricity, and have the capability and knowledge of protecting themselves accordingly.

Electrical training will cover the following topics:
- Safe procedures in deenergizing equipment (primary & secondary)
- Applying locks, tags and hasp on circuit breakers
- Safe procedures for reenergizing equipment (primary & secondary)
- Equipment checks verifying total deenergization

Although all employees are trained in electrical safety, the Authority allows a select few as "Qualified" to work on or around electrical equipment. Training is conducted annually or when changes are made at a facility.

Lock and Tagging

All equipment or machinery must be at a zero energy state before work is to be performed. A lockout/tagout device must be used to prevent the accidental reenergization or start-up of equipment. The auto mechanics must use the "Equipment down for service" magnetic sign when working on any machinery or equipment. These following procedures are written to ensure that all safety precautions are utilized correctly to protect all employees from the accidental start-up of equipment.

1. Deenergization of equipment – Circuits must be deenergized from all sources of electricity (primary and secondary) and release any stored energy that could reenergize equipment.

2. Locks and Tags – Only authorized (Qualified) employees are permitted to lock and tag equipment. The lock is used to prevent unauthorized personnel from accidentally reenergizing equipment. The tag shows who is responsible, the date and the reason for the shutdown.
3. Zero energy state of equipment and circuits – All machinery and equipment must be verified by a Qualified person that a zero energy state has been obtained before work is to be performed. This means that the equipment has been deenergized and cannot be restarted.
4. Reenergization of equipment – Before the start-up or reenergizing of equipment, the following procedures must be checked:
    a. A spot check must be performed to ensure that no tools or testing equipment was left behind.
    b. All locks and tags have been removed by the qualified person performing the work.
    c. A visual inspection has been performed by the qualified person on the equipment, ensuring that everything is secure and in working order.
    d. All other employees must stand back until an all clear signal has been given by the qualified person.

Hintful Tips

- All electrical work that is done should meet electrical codes and standards
- Do not work on electrical equipment if water poses an issue
- Only Qualified personnel is permitted to do the electrical work
- Jewelry and long hair are not permitted when electrical work is to be performed
- Only fiberglass ladders are to be used, not metal
- No circuits should be bypassed or jumped
- Only use tooling that is insulated
- Make sure that all lockout and tagout procedures are followed accordingly
- Always keep a clean work area

Monroe Municipal Utilities Authority

Hazardous Energy Control Form
Lockout/Tagout

Date: _____ Location _____

Type of Equipment Being Serviced or Repaired

_____

Energy Sources of Equipment

Circle all energy sources associated with this Equipment/Machine .

Electrical - capacitors,Other_____
Kinetic- pulleys,wheels,rollers,auger,Other_____
Stored - Pneumatic air lines, springs, hydraulic systems,Other_____

Locations of Energy Sources for Equipment/Machine

Electrical: _____
Kinetic: _____
Stored: _____

Authorized Personel Performing the Work

Name: _____
Company Name: _____
Title: _____

Shutdown Checklist (Primary and Secondary)

_____
_____
_____

Reenergize/Start-up Checklist (Primary and Secondary)

Monroe MUA Site Lockout/Tagout Procedures

Purpose
To provide written guidelines to protect employees repairing equipment from the hazards of hidden dangers of energized sources. Only trained and qualified personnel will be authorized to perform these tasks.

Qualified Personnel
They will be responsible to test voltages up to 110 volts AC. Any voltages 220 or greater will have to be handled by a licensed electrician or outside contractor qualified to perform such duties. Under no circumstances will a non-qualified person be asked to enter an area containing hazardous conditions.

Sites

Pumping Station 902

This site has 480 volts as its main feed. Before working on any equipment, make sure the **generator is turned off.**

- Pump #1,2,3 or 480v driven, 3 phase. To isolate the pumps, turn off the labeled breakers and test with a volt/amp meter. If necessary, kill the labeled main breaker feeding the site.
- Pump hoist is also 480v. It has a knife switch. Pull the switch to the off position and test. Kill the main breaker if needed.

The following are 110volts:

- Electric gate opener has a labeled breaker inside the panel. Shut down and test before working.
- Chatterbox that is plugged into a receptacle. Turn off the labeled breaker for the outlet and test.
- Yard lights have a labeled breaker in the panel. Shut off the breaker and test.
- Panel heater is plugged into a 110 outlet. To isolate this outlet, shut the labeled breaker and test.
- Generator heater. Shut off breaker and test.

Pumping Station 903

This site has 240 volts as its main feed. This station has no generator on site.

- Pumps 1 and 2 are 240 volt 3 phase. To isolate the pumps, turn off the labeled breakers and test with a volt/amp meter. If necessary, kill the main breaker feeding the site and retest.

The following are 110 volts:

- Bioxide chemical feed outlet. Shut the labeled breaker and test.
- Yard lights. Turn off labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Panel heater has a receptacle. Shut labeled breaker and test.

Pumping Station 904

This site is a cantex station where the pump controls are located down in the can. It has 240 volts, 3 phase as its main feed. This site also contains a natural gas powered generator. The main disconnect switch for the station is upstairs.

- Pumps 1 and 2 are 240 volts, 3 phase. To isolate these pumps, shut the labeled breaker on the panel down in the can and test. If necessary, turn the generator **OFF** and shut the main disconnect down upstairs and retest.

The following are 110 volts:

- Fan/blower receptacle breaker is located downstairs in the can. Shut the labeled breaker and test.
- Light switch and lights for the cantex are located down in the can. Shut the labeled breaker and test.
- Sump pump receptacle is located in the can. Shut the labeled breaker and test.
- Dehumidifier receptacle breaker is located downstairs in the can. Shut the labeled breaker and test.
- Receptacle for the chatterbox that is located upstairs in the MDI panel. Shut the labeled breaker and test.
- Yard lights have a breaker inside labeled panel. Shut the labeled breaker and test.

Pumping Station 905

This site is a cantex station where the pump controls are located down in a can. It has 220 volts, 3 phase as the main feed. This site also contains a portable Generac generator for emergency use only. The main disconnect for this station is a knife switch located upstairs in the labeled panel.

- Pumps 1 and 2 are 240 volts, 3 phase. To isolate these pumps, shut the labeled breaker located down in the can and test. If necessary, shut the main disconnect and retest.

The following are 110 volts:

- Exhaust fan/blower receptacle breaker is located downstairs in the can. Shut the labeled breaker and test.

- Dehumidifier receptacle breaker is located downstairs in the can. Shut the labeled breaker and test.
- The can light switch and lights are located down in the can. Shut the labeled breaker and test.
- Sump pump receptacle breaker is located down in the can. Shut the labeled breaker and test.
- Yard lights have a breaker located upstairs. Shut breaker off and test.
- MDI and Float backup panel located upstairs has a breaker. Shut the breaker and test.
- Generator heater is plugged into receptacle upstairs. The breaker is labeled. Shut off and test.

Pumping Station 906

This site is a cantex station where the pump controls are located downstairs in a can. It has 220 volts, 3 phase as the main feed. This station does not have a generator on site. The main disconnect for this station is located in a labeled panel upstairs.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breaker located down in the can and test. If necessary, shut the main disconnect and retest.

The following are 110 volts:

- Exhaust fan/blower receptacle breaker is located downstairs in the can. Shut the labeled breaker and test.
- Dehumidifier receptacle breaker is located down in the can. Shut the labeled breaker and test.
- The can light switch and lights are located in the can. Shut the labeled breaker and test.
- Sump pump receptacle is located down in the can. Shut the labeled breaker and test.
- Yard light breaker is located upstairs in the main panel. Shut the labeled breaker and test.
- Outside receptacle breaker is located in the main panel upstairs. Shut the labeled breaker and test.
- Chatterbox receptacle breaker is located in the main panel upstairs. Shut the labeled breaker.

Pumping Station 907

This station has a main feed of 220 volts, single phase. It has a small portable Honda generator for emergency backup.

- Pumps 1 and 2 are 220 volt, single phase. To isolate these pumps, shut the labeled breaker in the control panel and test. If necessary, shut the main disconnect switch and retest.

The following are 110 volts:

- Yard lights breaker is located in the main control panel. Shut the labeled breaker and test.
- Chatterbox receptacle breaker is located in the main control panel. Shut the labeled breaker and test.

Pumping Station 908

This site has 480 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is in a labeled panel.

- Pumps 1 and 2 are 480 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generators **OFF** and shut the main disconnect switch and test.
- The transformer feed is also 480 volts.
- Pump hoist is also 220 volts. It has a knife switch. Pull the switch to the off position and test. Kill the main breaker if needed.

The following are 110 volts:

- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Generator heater breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- GFI receptacle breaker. Shut the labeled breaker and test.

Pumping Station 909 Melva Lane

Pumping Station 910

This site has 220 volts, 2 phase as its main feed. This site contains a Generac portable generator for emergency backup. The main disconnect for the station is located inside the main panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breaker located down in the can and test. If necessary, shut the main disconnect and retest.

The following are 110 volts:

- Chatterbox receptacle. Shut the labeled breaker and test.

- Yard lights breaker. Shut the labeled breaker and test.
- 2 receptacles located on outside of the control panel. Shut the labeled breaker and test.

Pumping Station 911

This site has 220 volts, 3 phase as its main feed. This site contains a diesel generator for emergency backup. The main disconnect for this station is located behind the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the man control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Pump hoist is also 220 volts. The labeled breaker for the crane is located inside the main control panel.
- The muffin monster is also 220 volts. The labeled breaker for the muffin monster is located inside the main control panel.
- Main control panel heater is 220 volts. The labeled breaker for the receptacle is located inside the main control panel.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Panel 2 heater breaker is located inside the main control panel.
- Battery charger receptacle is located inside the main control panel.

Pumping Station 912

This site has 240 volts, 3 phase as its main feed. This site contains a diesel generator for emergency backup. The main disconnect for this station is located inside the main control panel cabinet.

- Pumps 1 and 2 are 240 volt, 3 phase. To isolate these pumps, shut the labeled breakers off in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Pump hoist is also 240 volt. The labeled breaker for the crane is located inside the main control panel.
- The muffin monster is 240 volt. The labeled breaker for the muffin monster is located inside the main control panel.

The following are 110 volts:

- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.

Pumping Station 913

This station has a main feed of 220 volts single phase. It has a small portable Honda generator for emergency backup.

- Pumps 1 and 2 are 220 volt single phase. To isolate these pumps, shut the labeled breaker in the control panel and test. If necessary, shut the main disconnect switch and test.
- Well pump is also 220 volts single phase. To isolate this pump, shut the labeled breaker in the control panel and test. If necessary, shut the main disconnect switch and retest.

The following are 110 volts:

- Yard lights breaker is located in the main control panel. Shut the labeled breaker and test.
- Chatterbox receptacle breaker is located in the main control panel. Shut the labeled breaker and test.
- Well control breaker is located in the main control panel.

Pumping Station 914

This station has a main feed of 480 volts, 3 phase. This site contains a diesel generator for emergency backup. The main disconnect for this station is located near the generator.

- Pumps 1, 2, and 3 are 480 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Pump hoist is also 480 volts. The labeled breaker for the crane is located inside the main control panel.
- Well pump is also 480 volts. To isolate this pump, shut the labeled breaker in the control panel and test. If necessary, shut the main disconnect switch and retest.
- The Transformer feed is also 480 volts.

The following are 110 volts:

- Yard lights breaker is located in the main control panel. Shut the labeled breaker and test.
- Chatterbox receptacle breaker is located in the main control panel. Shut the labeled breaker and test.

- Panel heater receptacle breaker is located in the main control panel. Shut down the labeled breaker and test.
- Sump pump receptacle is located down in the check valve pit. Shut the labeled breaker and test.
- Dehumidifier receptacle is located down in the check valve pit. Shut the labeled breaker and test.
- Portable heater receptacle is located down in the check valve pit. Shut the labeled breaker and test.

Pumping Station 915

This site has 220 volts, 2 phase as its main feed. This site has no generator. The main disconnect for this station is located behind the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel.
- Well pump control is also 220 volts. To isolate this pump, shut the labeled breaker in the main control panel.

The following are 110 volts:

- Yard lights breaker is located in the main control panel. Shut the labeled breaker and test.
- Chatterbox receptacle breaker is located in the main control panel. Shut the labeled breaker and test.
- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.

Pumping Station 916

This station has a main feed of 480 volts, 3 phase. This site contains a diesel generator for emergency backup. The main disconnect for this station is located near the generator.

- Pumps 1 and 2 are 480 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Pump hoist is also 480 volts. The labeled breaker for the crane is located inside the main control panel.
- The transformer feed is also 480 volts.
- The muffin monster is also 480 volts. The labeled breaker for the muffin monster is located inside the main control panel.

The following are 110 volts:

- Yard lights breaker is located in the main control panel. Shut the labeled breaker and test.

- Chatterbox receptacle breaker is located in the main control panel. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.

Pumping Station 917

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is in a labeled panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Wet well/fan light breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.

Pumping Station 918

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is located in the rear of the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Wet well fan breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Outdoor receptacle. Shut the labeled breaker and test.

Pumping Station 919

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is in the rear of the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- The muffin monster is also 220 volts. The labeled breaker for the muffin monster is located inside the main control panel.

The following are 110 volts:

- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Outdoor receptacle. Shut the labeled breaker and test.

Pumping Station 920

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is located in the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- 2 outdoor receptacles. Shut the labeled breaker and test.

Pumping Station 921

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is located in a labeled panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- 2 receptacles. Shut the labeled breaker and test.

Pumping Station 922

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is located in a labeled panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Phase monitor is also 220 volt. Shut the labeled breaker and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- GFI receptacle for hoist. Shut the labeled breaker and test.
- Volumeter receptacle. Shut the labeled breaker and test.

Pumping Station 923

This station has a main feed of 220 volts, 3 phase. This site contains a diesel generator for emergency backup. The main disconnect for this station is located in the main control panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- Gate opener is also 220 volt. Shut the labeled breaker and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Receptacle is inside main control panel. Shut the labeled breaker and test.

Pumping Station 924

This station has a main feed of 220 volts, 3 phase. This site also contains a diesel generator for emergency backup. The main disconnect for this station is a labeled panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.
- The muffin monster is also 220 volts. The labeled breaker for the muffin monster is located inside the main control panel.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- GFI receptacle for hoist. Shut the labeled breaker and test.
- Volumeter receptacle. Shut the labeled breaker and test.
- Panel heater receptacle. Shut the labeled breaker and test.

Pumping Station 925

This site has 220 volts, 3 phase as its main feed. This site contains a natural gas powered generator for emergency backup. The main disconnect for the station is located in a labeled panel.

- Pumps 1 and 2 are 220 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Generator heater receptacle breaker. Shut the labeled breaker and test.

- Chatterbox receptacle. Shut the labeled breaker and test.
- Wet well fan/light breaker. Shut the labeled breaker and test.
- Gate opener breaker. Shut the labeled breaker and test.
- Panel heater receptacle. Shut the labeled breaker and test.
- Outdoor receptacle. Shut the labeled breaker and test.

Pumping Station 926

This site is 208 volts, 3 phases as its main feed. This station contains a diesel powered emergency generator for emergency backup. The main disconnect for this station is located in the main control panel cabinet.

- Pumps 1 and 2 are 208 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volt:

- Bioxide chemical feed pump receptacle. Shut the labeled breaker and test.
- Yard lights breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Davit receptacle. Shut the labeled breaker and test.
- Wet well fan. Shut the labeled breaker and test.
- LP panel is behind the main control panel in a separate cabinet.

Pumping Station 927

This site 240 volts, 3 phase as its main feed. This station contains a diesel powered emergency generator for emergency backup. The main disconnect for this station is located in the main control panel cabinet.

- Pumps 1 and 2 are 240 volt, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** ands hut the main disconnect switch and test.

The following are 110 volts:

- Yard lights breaker. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Muffin monster. Shut the labeled breaker and test.
- Gate opener. Shut the labeled breaker and test.
- GFI receptacle. Shut the labeled breaker and test.
- Cabinet fan. Shut the labeled breaker and test.
- Bioxide pump. Shut the labeled breaker and test.

Pumping Station 928

This site is 240 volts, 3 phase as its main feed. This station contains a diesel powered generator for emergency backup. The main disconnect for this station is located in the main control panel cabinet.

- Pumps 1 and 2 are 240 volts, 3 phase. To isolate these pumps, shut the labeled breakers in the main control panel. If necessary, turn the generator **OFF** and shut the main disconnect switch and test.

The following are 110 volts:

- Yard lights. Shut the labeled breaker and test.
- Chatterbox receptacle. Shut the labeled breaker and test.
- Muffin monster. Shut the labeled breaker and test.
- Gate opener. Shut the labeled breaker and test.
- GFI receptacle. Shut the labeled breaker and test.
- Bioxide pump. Shut the labeled breaker and test.
- Davit receptacle. Shut the labeled breaker and test.
- Wet well fan. Shut the labeled breaker and test.

5 Well

This well house is supplied with a 240 volt, 3 phase main feed. It has a natural gas fed generator on site for emergency backup. The main disconnect for this well is located in the Electrical Control Room in the garage area. There are multiple breaker panels which are all labeled inside the well house. The generator must be put into the **OFF** position before starting any work.

- The production well pump and booster pumps are 240 volts, 3 phase. To isolate these pumps, shut the labeled breakers down and test. If necessary, shut the main disconnect and retest.
- There is a 240 volt transformer. Shut the labeled breaker and test.
- Aeration air stripper is 240 volts. There is a disconnect switch located in the area to isolate the power going to the air stripper.
- Heat trace for carbon filters is 240 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breakers and test.
- Wall heater breakers are labeled. Shut the breaker and test.
- Flow switch. Shut the labeled breaker and test.

6 Well

This well house is supplied with a 240 volt, 3 phase main feed. It has a diesel gas fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the **OFF** position before starting any work.

- The production well pump and booster pumps are 240 volts, 3 phase. To isolate these pumps, shut the labeled breakers down and test. If necessary, shut the main disconnect and retest.
- There is a transformer 240 volts. Shut the labeled breaker and test.
- Aeration air stripper is 240 volts. There is a disconnect switch located in the area to isolate the power going to the air stripper.
- Wall heaters are 240 volt fed. Shut the labeled breaker and test.
- Heat trace for the carbon filters is 240 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breaker and test.
- GFI and regular receptacles. Shut the labeled breaker and test.
- Flow switch. Shut the labeled breaker and test.
- SCADA system. Shut the labeled breaker and test.

7 Well

This well house is supplied with a 480 volt, 3 phase main feed. It has a diesel gas fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the **OFF** position before starting any work.

- The production well pump, booster pumps, and the ASR well are 480 volts, 3 phase. To isolate these pumps, shut the labeled breakers down and test. If necessary, shut the main disconnect and retest.
- There is a transformer 480 volts. Shut the labeled breaker and test.
- Aeration air stripper is 480 volts. There is a disconnect switch located in the area to isolate the power going to the air stripper.
- There are multiple wall heaters located throughout the well site that are 480 volt fed. Shut the labeled breakers and test.
- Old torit blower is 480 volts. There is a labeled disconnect switch on the wall right behind it. Shut the switch and test.
- Motor control valve in rear pipe building that is 480 volts. A disconnect switch is mounted on the wall. Shut the labeled switch and test.
- Receptacle for the air conditioner is 220 volts. Shut the labeled breaker and test.
- Heat trace for the carbon filters is 240 volts. Shut the labeled breaker and test.
- Motorized overheard door is 240 volts driven. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breakers and test.
- Multiple GFI and regular receptacles. Shut the labeled breakers and test.
- Heat tracer for pipe work. Shut the labeled breaker and test.
- Flow switch. Shut the labeled breaker and test.
- Caustic exhaust fan. Shut the labeled breaker and test.
- Chart recorders. Shut the labeled breaker and test.

8 Well

This well house is supplied with a 480 volt, 3 phase main feed. It has 2 diesel gas fed generators on site, 1 for the ASR, and the other for the production well as an emergency backup. The labeled main disconnect switch is located inside the tower. The generators must be put into the **OFF** position before starting any work.

- The production well pump, and the ASR well are 480 volts, 3 phase. To isolate these pumps, shut the labeled breakers down and test. If necessary, shut the main disconnect and retest.
- There is a transformer 480 volts. Shut the labeled breaker and test.
- Old torit blower is 480 volts. There is a labeled disconnect switch on the wall right behind it. Shut the switch and test.
- Backwash pumps are 480 volt. Shut the labeled breakers and test.
- Roots blower for air washing the green sand filters is 480 volts. Shut the breaker and test.
- Boiler that is 480 driven located outside in an enclosed building. To isolate, shut the labeled breaker inside the tower.
- Motorized valve in the pipe shed is 480 volts. A disconnect switch is labeled for shut down.
- Wall heater in the pipe shed is 480 volts. A disconnect switch is labeled for shut down.
- Wall heaters are 240 volts. Shut the labeled breakers and test.
- Booster pumps in the clear well room are 240 volts. Shut the labeled breakers and test.
- Aeration air stripper is 240 volts. Shut the labeled breaker in the clear well room.
- Heat trace for the pipe work is 240 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breakers and test.
- Multiple GFI and regular receptacles. Shut the labeled breakers and test.
- Flow switch. Shut the labeled breakers and test.
- Chart recorders. Shut the labeled breakers and test.
- Air compressors. Shut the labeled breakers and test.

9 Well

This well house is supplied with a 480 volt, 3 phase main feed. It has a natural gas fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the **OFF** position before starting any work.

- The main production well pump motor is 480 volts, 3 phase. To isolate this pump, shut the labeled breaker and test.
- Transformer is 480 volt. Shut the labeled breaker and test.
- Wall heater is 480 volts. Shut the labeled breaker and test
- Torit blower is 220 volts. The labeled disconnect switch is on the wall behind the blower.
- There are 3 motorized overhead doors that are 220 volt fed. Shut the labeled breakers and test.
- Loading dock is 220 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breakers and test.
- Multiple GFI and regular receptacles. Shut the labeled breakers and test.
- Flow switch. Shut the labeled breaker and test.
- Chart recorders. Shut the labeled breaker and test.
- Air compressor. Shut the labeled breaker and test.

10 Well

This well house is supplied with a 480 volt, 3 phase main feed. It has a natural gas fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the **OFF** position before starting any work.

12 Well

This well house is supplied with a 480 volt, 3 phase main feed. It has a diesel emergency generator on site for backup. The main disconnect for this well is in the main building located near the primary pumps. The generator must be put into the **OFF** position before starting any work.

The production well pump and booster pumps are 480 volts, 3 phase. To isolate these pumps, shut the labeled breakers down and test. If necessary, shut the main disconnect and retest.

- There is a 240 volt transformer. Shut off the labeled breaker and test.
- The Accutab system is 480 volt, 3 phase, shut off the labeled breaker and test.
- All heaters are 480 volt, 3 phase, shut off labeled breaker and test.
- Outlets and lighting are 110 volt, shut off labeled breaker and test.

13 Well

This well house is supplied with a 480 volt, 3 phase man feed. There is no emergency backup generator on site. The main disconnect is located in the building.

The production well pump is 480 volt, 3 phase. To isolate the pump, shut off the labeled breaker and test.

The heaters, Accutab system are also 480 volt, 3 phase to isolate each of these shut off the labeled breakers and test.

All lighting, outlets and heat trace are 110 volt. To isolate these, shut off the labeled breaker and test.

There is a manual switch with a 200 amp plug for portable emergency generator.

Well 12 Storage

Tuckahoe Water Storage Facility

This well house is supplied with a 480 volt, 3 phase main feed. It has a diesel fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the “OFF” position before starting any work.

- The 2 main production well pump motors are 480 volts, 3 phase. To isolate this pump, shut the labeled breaker and test.
- Transformer is 480 volt. Shut the labeled breaker and test.
- Wall heater is 480 volt. Shut the labeled breaker and test.
- Gate opener is 220 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breakers and test.
- GFI and regular receptacles. Shut the labeled breakers and test.
- SCADA system. Shut the labeled breaker and test.
- Motorized valves that are 110 volts. Shut the labeled breaker and test.
- Dehumidifier receptacle. Shut the labeled breaker and test.
- Sump pump receptacle. Shut the labeled breaker and test.

Black Horse Pike Water Storage Facility

This well house is supplied with a 480 volt, 3 phase main feed. It has a diesel fed generator on site for emergency backup. The labeled main disconnect switch is located in the primary pump room. The generator must be put into the **"OFF"** position before starting any work.

- The 2 main production well pump motors are 480 volts, 3 phase. To isolate this pump, shut the labeled breaker and test.
- Transformer is 480 volt. Shut the labeled breaker and test.
- Wall heater is 480 volts. Shut the labeled breaker and test.
- Gate opener is 220 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breaker and test.
- GFI and regular receptacles. Shut the labeled breaker and test.
- SCADA system. Shut the labeled breaker and test.
- Motorized valves that are 110 volts. Shut the labeled breaker and test.
- Dehumidifier receptacle. Shut the labeled breaker and test.
- Sump pump receptacle. Shut the labeled breaker and test.

Herbert Blvd Tower

This pump house is supplied with a 240 volt, 3 phase main feed. The labeled main disconnect switch is located in the pump room. No generator is on this site.

- The well pump motor is 240 volts, 3 phase. To isolate this pump, shut the labeled breaker and test.
- Transformer is 240 volt. Shut the labeled breaker and test.
- Wall heater is 240 volt. Shut the labeled breaker and test.

The following are 110 volts:

- Light and switch breakers. Shut the labeled breaker and test.
- GFI and regular receptacles. Shut the labeled breaker and test.
- Tower chart recorder. Shut the labeled breaker and test.

Plant

The plant or operations department contains many hazards that could cause potentially unsafe conditions of not locked, tagged and blocked properly. High voltages, liquids, gases and hydraulics are just a few potential hazards that pose imminent dangers to all employees. The following voltages are present at the operation facility. Only trained personnel are

authorized to test, lock out and block any equipment. All other employees must be notified that a piece of machinery or equipment has been locked and tagged. The following voltages have been labeled and are currently on site. Please make sure that the generator is turned **"OFF"** before starting any work.

Front Control Room

This building has a 480 volt main feed. The main disconnect is located on the control panel in the building.

- The 3 pumps for the holding tank are 480 volts. The main disconnect is located on the main control panel inside the control room. Shut the labeled breaker and test.
- Blower/Aerators are 480 volts. The main disconnect is inside the control room. Shut the labeled breaker and test.
- Transformer is 480 volts. Shut the labeled breaker and test.
- Muffin monster is 480 volts. Shut the labeled breaker and test.
- Wall heater is 480 volts. Shut the labeled breaker and test.
- Fuel pump disconnects are 480 volts. The disconnect switches are located outside the mechanic shop. Shut the labeled breaker and test.
- The Godwin pump controls are located outside the control room. The panel has a disconnect switch that is labeled 480 volts.

The following are 110 volts:

- Pump hoist receptacle is 110 volts. Shut the labeled breaker and test.
- MDI/bubbler control is 110 volts. Shut the labeled breaker and test.
- Emergency backup lights for the entire plant are 110 volts. Shut the labeled breaker and test.
- Wall receptacles are 110 volts. Shut the labeled breaker and test.

Mechanics Garage

This building has a 240 volt feed. The main disconnect for this area is in the parts cage.

- The auto lift is 240 volts with a labeled disconnect. Shut the labeled breaker in the parts cage and test.
- Air compressor is 40 volts with a labeled disconnect. Shut the labeled breaker and test.
- Welder is 240 volts. Shut the labeled breaker and test.
- Gate opener is 220 volts. Shut the labeled breaker and test.
- Wheel balancer is 220 volts. Shut the labeled breaker and test.

The following are 110 volts:

- Wall receptacles are labeled. Shut the labeled breaker and test.

- Light switches are labeled. Shut the breaker and test.
- Wall heaters are 110 volts. Shut the labeled breaker and test.
- Drop lights are 110 volts. Shut the labeled breaker and test.

The Plant Headquarters

- This building has a 480 volt feed. There are multiple breaker panels in this building. The main disconnect panels are in the electrical room located near the lunch room.
- 480 volt transformer. Shut breaker and test
- 240 volt feed for the A/C. Shut the labeled breaker and test.
- 480 panel with a disconnect breaker to feed the future kitchen area.

The following are 110 volts:

- Wall receptacles are all labeled. Shut breaker and test.
- Light switches are all labeled. Shut the breakers and test.

Pole Barn #1

This building has a 220 volt feed. The main breaker panel is located in the first bay.

- The old drill press was 220 volts with a disconnect. Shut the labeled breaker and test.
- The torit is 220 volts. Shut the labeled breaker and test.

There are multiple 110 volt switches and receptacles located in bays 1 though 4 in this building. All switches and receptacles have been labeled with their breaker number. Please shut the proper breaker and test before work begins.

Pole Barn #2

This building has a 240 volt, 3 phase feed and a 240 volt, single phase feed. The main disconnect switch and breaker panels are located in the welding shop.

- Air compressor is 420 volts, 3 phase with a label disconnect switch behind it. Shut the labeled breaker and test.
- Milling machine is 240 volts, 3 phase with a disconnect switch behind it. Shut the labeled breaker and test.
- Lathe machine is 240 volts. Shu the labeled breaker and test.
- Drill press is 240 volts, 3 phase with a disconnect switch behind it. Shut the labeled breaker and test.
- Geka machine is 240 volts, 3 phase. Shut the labeled breaker and test.
- Small bench grinder is 240 volts, 3 phase with a disconnect switch. Shut the labeled breaker and test.

- Exhaust fan for the paint booth is 240 volts, 3 phase with a labeled disconnect. Shut the labeled breaker and test.
- Powder coat oven is 240 volts, 3 phase with a labeled disconnect. Shut the labeled breaker and test.

The following are 110 volts:

- Light switches are 110 volts. Shut the labeled breakers and test.
- Sandblaster receptacle is 110 volts. Shut the labeled breaker and test.
- Big grinder is 110 volts. Shut the labeled breaker and test.

Standard Operating Procedure for Ladder Climbing and Aerial Lifts at all Monroe MUA facilities.

Written: April 2010

Reviewed: Feb 2018

Reviewed: 6/23/2025

Purpose

The purpose of this document is to provide a written guideline on the proper safety precautions that are needed when doing extremely high aerial work. This policy is for ALL personnel, including outside contractors who are planning on doing any aerial work on Monroe MUA property. All rules and guidelines must be followed in accordance with all PEOSHA standards. Any outside contractors who don't comply to these standards, will be asked to shutdown the job immediately until all safety measures are corrected and followed.

Competent Person

There will be a competent person on site at all times who will assume the responsibility of overseeing the job, ensuring that all safety standards are being followed. A competent person is defined as someone who has been trained and has complete knowledge of his task at hand and all the responsibilities with it. He must take whatever safety measures needed to protect him and his coworkers from any dangers they may encounter. **No work will start without the property safety equipment and PPE.**

The following Monroe MUA Facilities contain extremely high structures that require safety training and the proper PPE before attempting to climb:

5/6 Wells

These well houses don't have a water storage facility to climb. However, they contain a packed aeration tower that stands 36 feet tall with multiple hatches that need to be opened every few years to inspect or change out the plastic balls. An Aerial lift is needed to reach the upper hatch, therefore, proper caution is required. The lift should be parked on a flat surface for stability. Personnel working on the platform should use extreme caution and follow the lift instructions before using. A safety harness with a lanyard, hardhat, and gloves should be worn. The person(s) doing the work will not stand on the rails or chains of the lift to gain access to the hatch door. Position the lift close enough to the tower to prevent overreaching. Once the hatch is open, start removing balls by hand until they are out of reach. Use an extension pole to pull the remaining balls towards you until they are all removed. When reloading the new balls, carefully raise the box and empty the balls into the tower. Remember, NO REACHING

7 Well

This well house contains a water storage tank and a packed aeration tower. There is a fixed latter that is in 2 sections located inside the tower that extends to the bottom of the bowl. A safety cable attachment with shock absorbers is mounted to the ladder for climbing. A hard had and safety harness with a cable clip is required to climb the tower. To climb the tower, connect the cable clip to the cable and proceed up the ladder using the 3 point climbing

method. Once you have reached the top of the first section of ladder, disconnect yourself from the cable and step onto the catwalk.

Reconnect the cable on the second ladder and continue climbing. Repeat the steps descending from the ladder. The packed aeration tower stands 36 feet tall with multiple hatches. Follow wells 5/6's written procedures before performing any work.

8 Well

This well house contains a water storage tank and a packed aeration tower. There is a fixed ladder located inside the tower that extends up to the bottom of the bowl. The ladder has a cable attachment with shock absorbers mounted for climbing. A hard hat and safety harness with a clip is required before climbing. Once you are attached, proceed up the ladder 10 feet and slide the drop ceiling tile aside. Continue up the ladder using the 3 point climbing method until you reach the catwalk. Carefully disconnect the clevis from the cable and step off to take a breather if necessary. Reconnect yourself to the cable and continue your climb. Repeat the steps when descending from the ladder. The packed aeration tower stands 36 feet tall with multiple hatches. Follow wells 5/6's written procedures before performing any work.

Tuckahoe Storage Tank

This water storage facility is a 1 million gallon tank that stands 50 feet tall. There is a fixed ladder that is mounted to the tank that starts 6 feet off of the ground and continues to the top of the tank. The ladder has a cable attachment with shock absorbers mounted for climbing. A hard hat and safety harness with a clip is required before climbing. A 6 foot ladder is needed to reach the bottom of the fixed ladder. Place the ladder on a flat surface stability. Carefully climb the extension ladder until you reach the fixed ladder. Attach the cable clevis to the cable and proceed up the ladder using the 3 point climbing method. The fixed ladder extends to the roof of the tank. Disconnect yourself from the cable if you need to get on the roof. Reconnect yourself to the cable when descending down the ladder. Carefully step off of the fixed ladder to the extension ladder. Disconnect yourself from the cable and climb down the ladder.

9 Well

At this location we have 3 new apparatus that would require climbing for periodical inspections and maintenance all of which require proper PPE. The air stripper is a 36 foot high tower packed with plastic balls for aeration, periodic inspections would result in climbing the ladder that is affixed to the tower. When climbing the ladder, which has an enclosure, **always** use the proper 3 point climbing method. Once person has reached the top of the ladder, there is a platform from which you must be extremely careful transitioning to and then you must be tethered off immediately using your safety harness and lanyard. The inspection platform has an enclosure around it for additional safety. Upon completion of

work the same care and climbing method must be used on your descent down the ladder. At this site there is also a 25 foot backwash tank with a ladder that is affixed to the tank. This tank also requires periodic inspections and maintenance so the same method of climbing and safety precautions apply to this tank as explained in the previous tower. Finally, there is activated carbon tank located inside of the building that has an access port approximately 10 foot off the ground. During the inspection, the bolts of the access port must be removed, the recommended method should be to set up scaffolding so the worker can perform this task safely. Once on the scaffolding, worker should always be tethered off with safety harness and lanyard. Additionally, no one should ever work alone, there needs to be extra personnel on site in the event someone should fall. Inside the building there are 2 green sand filters that have access ports for inspections and maintenance. The preferred method of this task would be to set up scaffolding which requires safety harness and lanyard but could be done on an extension ladder with the same safety protocol as the scaffolding.

Interconnect Storage Tank

This water storage facility is a 1 million gallon tank that stands 50 feet tall. There is a fixed ladder that is mounted to the tank that starts 6 feet off the ground and continues to the top of the tank. The ladder has a cable attachment with shock absorbers mounted for climbing. A hard hat and safety harness with a clip is required before climbing. A 6 foot ladder is needed to reach the bottom of the fixed ladder. Place the ladder on a flat surface for stability. Carefully climb the extension ladder until you reach the fixed ladder. Attach the cable clevis to the cable and proceed up the ladder using the 3 point climbing method. The fixed ladder extends to the roof of the tank. Disconnect yourself from the cable if you need to get on the roof. Reconnect yourself to the cable when descending down the ladder. Carefully step off the fixed ladder to the extension ladder. Disconnect yourself from the cable and climb down the ladder.

Black Horse Pike Storage Tank

This water storage facility is a 1 million gallon tank that stands 50 feet tall. There is a fixed ladder that is mounted to the tank that starts 4 feet off of the ground and extends to the top of the tank. The ladder has a cable attachment with shock absorbers mounted for climbing. A hard hat and safety harness with a clip is required before climbing. A 6 foot extension ladder is needed to reach the bottom of the fixed ladder. Place the ladder on a flat surface for stability. Climb the extension ladder to the rungs of the fixed ladder and attach yourself to the cable. Carefully proceed up the ladder using the 3 point climbing method until you reach the top of the tank. Disconnect yourself from the cable if you need to get on the roof of the tank. Reconnect yourself to the cable when descending down the ladder. Carefully step off of the fixed ladder to the extension ladder. Disconnect yourself from the cable and climb down the ladder.

Herbert Boulevard Tower

This facility contains a 250,000 gallon water tower. There is a fixed ladder that starts 25 feet from the ground and extends to the top of the tower. The ladder is enclosed by a metal cage to protect someone from falling backwards. The cage only extends 75 feet up the tower before it ends. The ladder continues for another 10 feet before you reach the top of the tower. Before the tower is climbed, the following PPE and procedures should be followed:
A hard hat and safety harness must be worn at all times. (2) 6-foot lanyards must be attached to the left side and right side of the safety harness. Attach one lanyard at a time to 1 rung above you. Keep rotating the lanyards from left/right side on the above rungs. Continue using this method until you reach the top of the tower. Take as many breaks as needed before continuing to climb. Disconnect the lanyard and step onto the catwalk. Reconnect the lanyard to the ladder and repeat the same steps when you start descending. A 32 foot extension ladder is needed to reach the fixed ladder. Secondary help is needed to raise and foot the ladder.

Under no circumstances should any aerial work be done alone. Secondary help is required!

Policy and Procedures for the Jet Vac

Before starting, a pre-trip of the entire truck must be completed. Once the truck has been cleared to drive, carefully pull the truck out of the pole barn. **(Make sure that the door is completely open.)**

Use the fire hose on the left side of the truck and hook it up to a hydrant. Open the hydrant slowly to fill the truck, especially out in the system. This will avoid dirty water complaints from customers. As the truck is filling, watch the sight tube located in the rear of the truck. This will give you an indication of your water level. Slowly close the hydrant when the truck is completely filled.

A chase truck should be used if possible when the jet vac is requested on a jobsite.

When the jet vac is being used for preventative maintenance or main blockages, position the truck over the desired manhole and follow the proper operating procedures.

Utilize all safety lighting on the truck (strobes, beacon light, etc.)

Set up the proper safety work zone with flaggers and cones when needed.

Use the proper PPE when operating the Jet Vac. (Safety goggles, Shield, latex gloves, apron, rubber nitrile gloves, hard hat and safety vest.)

Use the proper tubes. Remove the bungie cords and carefully lower the tube.

Open the desired manhole, using the proper hook.

Use the trucks controls to extend and raise the boom **(Watch out for overhead powerlines).**

Once the boom is raised, articulate the trucks controls as close to the manhole as possible.

Extend the hose real arm assembly to a suitable position. Remove the clevis pins from the arm assembly until the desired length is reached. Put the clevis pins back in, locking the arm in place. **(Remember to place the pins back into the arm assembly before leaving).**

Hook the tubes to the boom by locking them together. The tubes may get tight to snap together. **(Lubricate the gaskets as needed).**

Lower the tubes into the manhole, carefully watching overhead. Place the tube into the manhole trough. Grab the hose protectors **(Bumble bee's).** Before lowering the hose through the bumble bee's, shut the water valve on the rear control panel to stop water from squirting all over. Lower the hose through the bee's and into the trough. Once the bee's are

in position (**Just inside the trough, and on top of the manhole lid)**, re-open the valve and turn the water switch on.

Next turn the Exhauster **(vacuum)** on.

Throttle the truck to no more than a 1,000 PSI on the water gage during normal maintenance procedures. In the case of a major blockage, throttle the truck up to no more than 2,000 PSI until the blockage is free. Once the blockage is free, throttle the truck back down to 1,000 PSI.

Working with these high pressures can be dangerous. Use caution.

Run the jetter hose in slowly allowing the jets time to scour the main.

Position the tube correctly in the manhole to suck any debris being brought back from the jets.

Always throttle the truck down before turning off the water pump and vacuum.

If the truck fills up before the main is clear, undo the last tube from the boom and follow the proper steps to close down the truck. The assigned driver will leave the job site and go empty and refill the truck. **The open manhole should be manned at all times. Under no circumstances should the open manhole be unattended.** If the tubes are removed from the manhole before completion, **the manhole lid must be closed until the truck returns.**

Once the job is completed, survey the jobsite to ensure manhole covers are back on and no tools were left behind.

Emptying the Truck

Back the truck up slowly to the trough until the tires hit the concrete parking ballards.

Put the **Parking Brake On.**

Follow the trucks operating procedures to engage controls.

Chock the wheels.

Open the tank valve to drain wastewater. **(Caution, trough may be slippery).**

Use the side controls to extend the boom out first. Raise the boom entirely.

Raise the body until water slows down completely.

Lower the body.

Open the rear latches.

Slowly open the rear door allowing the remaining water to drain.

Raise the body to empty remaining solids and water.

Turn the water pump on inside the truck to flush the screen and body. (Make sure the ball valve on the side of the truck is open to tank flush and the truck has enough water in the clean water tank before throttling up.) No clean water in the truck could cause the water pump to burn up.

When the tank is cleaned, throttle down, and turn the water pump control off.

Lower the body slowly.

Lower the rear tank door until it closes. Lock all 4 latches on the door.

Lower the boom and lock it in place.

Shut the drain valve **(Caution, trough may be slippery).**

Remove the wheel chock.

Follow the trucks shutdown operating procedures.

Take off the parking brake.

When the truck has to be emptied into a manhole out in the street, hook the blue hose up to the discharge pipe of truck. Unroll the hose out into the manhole. Once the hose is in place and secured, open the valve **slowly**, allowing the water to drain from the tank. Once the tank is empty, shut the valve and grab the blue hose and drain the remaining water into the manhole.

All equipment should be cleaned thoroughly before the truck is put away.

Policy and Procedure for Metal Shear

1. Make sure you are wearing all required safety gear, glasses, gloves etc.
2. Mark metal where cut is desired.
3. Place metal in shear and position it in place for cut.
4. Pull fastening handle down to lock metal in place.
5. Step back, gather footing, and step on shear footbar to cut metal.
6. After cut is complete, you must release fastening bar to raise shear blade.

REMEMBER TO KEEP ALL EXTREMETIES AWAY FROM SHEAR BLADE WHILE CUTTING

Policy and Procedure for Metal Brake

1. Make sure you are wearing all required safety gear, glasses, gloves etc.
2. Mark metal at desired bend.
3. Place metal in brake and position it at desired mark.
4. Lower fastening arms on side of brake to lock metal in place.
5. Raise bending bar up to desired bend and release locking arms to pull metal free.

REMEMBER TO KEEP ALL EXTREMETIES AWAY FROM BRAKE WHEN BENDING METAL

Policy and Procedure for Lawn Mowers

Check engine oi. Fill to proper level.

Check fuel. WARNING: DO NOT FILL FUEL TANK WHILE SMOKING, NEAR AN OPEN FLAME OR WHILE THE ENGINE IS RUNNING.

Check blades for sharpness and cracks. DO NOT CHECK WHEN ENGINE IS ON. If blades need to be sharpened, remove and take to proper sharpening center.

Check the area you are cutting for any debris, cans, sticks, glass etc.

Once that is complete, you are ready to cut. With either cutter you are using (rider or push), start the machine by pulling the cord or turning the key.

Once they are started, keep hands and feet away from blades. To engage blades on the rider, pull the yellow PTO knob to shut off, just push knob in. You can set the height of the blades by the handle on the right side of the steering column. If something gets jammed in the blade, turn the machine off and carefully check the blades for tension – you do not want to unjam the blades and have them whip around on you.

When you are done cutting, wash down the mowers and return to their homes in the trailers.

Policy and Procedure for Generators

Start Up Procedure
Turn all pumps to off position.
Disconnect transfer switch from Conectiv power to generator power.
Take generator power cord and plug into socket.
Check all fluids in generator.
Open generator control door and make sure breakers on right or left side is in off position.
Start generator.
Flip breaker on to the cord that is being utilized.
Put pump controls on automatic.

Shut Down Procedure
Turn pumps to off position.
Turn breaker off on generator.
Turn generator off.
Unplug cord from socket.
Reconnect transfer switch from generator power to Conectiv power.
Turn pumps on automatic.

Policy and Procedure for Trencher

Check all surroundings.

Check the area to be trenched for underground wires, cables, gas and water lines.

Check engine oil. Fill to proper level.

Check fuel. WARNING: DO NOT FILL FUEL TANK WHILE SMOKING, NEAR AN OPEN FLAME OR WITH THE ENGINE RUNNING.

Position the trencher at the starting point and start the machine, let it warm up.

Follow the instructions on the trencher to lower the boom, before hitting the ground pull in the chain activator, located on the handle bar to start the chain going. **Always keep hands, feet, loose clothing or any other kind of limb away from the boom and chain.**

Slowly lower the boom into the ground to the desired depth. **Slowly.**

Use the forward/reverse arm to move the trencher to the desired direction.

Manually move the trencher from right to left and so on.

Whenever the boom is brought up out of the ground, release the chain activator.

Use only on level ground. Or ground you can control it. Watch for mud and any other thing that it can get stuck in.

If something gets stuck in chain, DO NOT TRY TO REMOVE WITH ENGINE RUNNING OR WITH YOUR HAND. Shut machine down and remove the object only when safe.

When the trenching is complete, park the machine away from the job site.

Wash the trencher down and return to the plant.

Policy and Procedure for Eel Machine

Check gas. WARNING: DO NOT FILL GAS WHILE SMOKING, NEAR AN OPEN FLAME OR WITH ENGINE RUNNING.

Check engine oil. Fill to proper level.

Never load by yourself, get help.

When operating, choose the proper bit and the proper gear.

Wear the required hand protection, including the glove provided and eye protection.

Tearing apart the equipment

Rubber gloves should be work as should eye protection.

Upon returning to the plant, the machine and cables will be washed down and returned to their proper place.

Policy and Procedure for Wet/Dry Vac

Check power cord for cracks or splits in line.

Plug in.

When using the vac for water, remove the filter inside to prevent getting wet and dryrotting.

Turn on by switch on handle.

When you are complete the vacuuming process, empty the cannister into proper waste basket and return to proper location.

Policy and Procedure for Vehicle Lift

To use lift and raise vehicle

Check lift and lift support arms for cracks and abnormalities.

Drive in and center vehicle over lift.

Position lift arms so they grab a major frame support.

Provide pressurization to cylinders by moving red handle to the left.

Once pressurization is complete, use yellow handle to slowly rise lift to confirm that you have grabbed a solid part of the frame.

Lift vehicle to desired height.

Once vehicle is at desired height, make sure that lift lock is in place. Lift lock is located at base of cylinder closest to the wall. Lift lock will be the leaning forward **NOT STRAIGHT UP**, if it is not leaning forward, push it so that it is.

DO NOT STAND UNDER VEHICLE OR LIFT UNTIL YOU HAVE THE LIFT LOCK IN ITS PROPER POSITION.

To lower vehicle

Pull lift lock back so that its standing in upright position.

Depressurize the cylinders by pulling the red handle back.

Once that is complete, (air has completely been released from system), use the yellow handle to lower vehicle.

Once the vehicle is on the ground, do not lower the lift to the ground. Return the lift arms to original position, then lower to the ground.

Policy and Procedure for Steam Jetting

Turn power on at circuit breaker on wall.

Connect water and **make sure that it is turned on.**

Check kerosene for heating.

Turn machine on by turning knob to desired position (pressure only or steam.)

Turn temperature knob to desired temperature.

If you choose to use chemicals, turn chemical knob to desired amount.

When you are finished using, start with chemicals – turn knob back to 0 and run machine until no more chemicals are coming out.

Then turn temperature back to 0 and run machine until the machine and line is cool.

Then turn the machine off and put the breaker back to off and lock it.

Policy and Procedure for Forklift

Check all surroundings before starting vehicle and warn all around.

Check equipment for leaks, use a light, never an open flame or your hand.

Check hydraulic fluid and system. Repair any leaks and fill to proper level.

Check engine oil level. Inspect all plugs, filler caps and other fittings for leaks.

Check for broken, missing or defective parts and have repaired.

Check tires for cuts, bulges, irregularities and abnormal wear.

Check coolant level. WARNING: COVER RADIATOR CAP WITH A CLOTH BEFORE YOU OPEN IT.

Check fuel level. WARNING: NEVER FILL THE FUEL TANK WHILE SMOKING, WHEN NEAR AN OPEN FLAME OR WITH THE ENGINE RUNNING.

When starting Forklift

Make sure the red kill knob is pushed in.

Make sure the emergency brake is on and the vehicle is in neutral before you start the vehicle.

Start the vehicle, release the emergency brake, raise the forms just off the ground to drive.

When transporting something on forks, **make sure you or no one else is under the load** and when driving, lower the load close to but not hitting the ground.

When parking the Forklift

Park on level ground.

Place in Neutral, set emergency brake, pull red kill knob until the engine shuts down and turn the key off.

Policy and Procedure for Air Compressor

These policies apply to all air compressors.

Check engine oil. Fill to proper level.

Check compressor oil. Fill to proper level.

Check fuel level. WARNING: DO NOT FILL FUEL TANK WHILE SMOKING, NERA AN OPEN FLAME OR WITH THE ENGINE RUNNING.

Check air hose and fittings for cracks and tears. Repair all found.

For each one used, jackhammer or clayspade, use the proper cutting blade.

Make sure you have the proper protection, eye, ears and head.

After you have gone through the previous steps, and you know where you want to use the jackhammer or clayspade (which you should know where before removing them from the vehicle), you want to start it up.

The start up procedure is: while pressing the bypass button, turn the start up knob to the start position and hold it there until it starts. Once it starts, just let go of the knob, let warm up.

Remove the tool you'll need (jackhammer or clayspade) using your legs, not your back.

Hook up the air, make sure the cotter pin is in place connecting the air supply to the tool.

Turn air on and start to use the equipment using your legs and resting the jackhammer on the ground. No need to press down on the hammer (you can't make it go through the street any faster). Just rest it on the ground and hold it in place, let the hammer do the work.

Once you have completed, turn the air off and drain the air **before** disconnecting the air line. Roll up the air line, turn the compressor off and put the equipment away.

Policy and Procedure for Gas Pump

This policy is for the gas pump at the operations plant.

Determine what type of fuel the vehicle you are filling requires. Gas or diesel.

Unlock the control panel to the pump.

Insert your card and pull it out.

Type in the vehicle number (Located on the front fender of the vehicle).

Choose which pump you need. #1 for Diesel or #2 for Gasoline.

Unlock the pump handle and insert it into gas fill on vehicle.

Pull handle in and fuel will start to fill tank.

When tank is full, pump handle will automatically shut off.

Return handle to holster and be sure to lock handle and control panel.

Policy and Procedure for Tap Machine

Determine the size on the water main you will be tapping.

Lay out the parts of the tap machine you will need, chain, hooks, boxed end wrench, open end wrench, quick release, large ratchet, tap machine itself, corp and tapping bit. (The size of the bit, corp and quick release depends on the size tap you are making ¾" or 1"). The saddles will be determined after you discover the exact size of the main.

Uncover main and clean thoroughly. There can not be as much as a grain of dirty on the main where you are making the tap. VERY IMPORTANT.

Once you have uncovered the main and determined the exact size of the main you will then choose the proper saddle the same size as the main. And install the gaskets on the saddle (check for dry rot or cracks on the saddles and change if need be), small gasket inserts in the top of the saddle and the larger one underneath.

Place the saddle with the gaskets on top of the main and place the bottom portion of the tap machine on the saddle, making sure it is in the grove and seated properly.

Then place the hooks on the sides of the bottom portion of the tap machine facing out and wrap the chain around the bottom of the main grabbing each hook on both sides. Make

sure there are no kinks in the chain. Snug nuts on hooks by hand and tilt the tap machine to the side in a 4 degree angle. Tighten nuts with the boxes end wrench. Every couple turns, tap the chain to assure there are no kinks in chain.

Once you are tight (and make sure that you are) check the bleeder petcock on the face of the machine and make sure it is in the closed position.

Now turn your attention to the top portion of the tap machine, at the bottom of the shaft you want to install your bit. Make sure that the pin on the side is pushed against the side of the shaft and the brass nut is loose. Slide your bit in and tighten the brass screw without stripping it. Then grab the bit and tug making sure its in place and will not dislodge while making the tap. Grease up your bit with the supplied grease or Crisco (not regular grease) and thread the top portion of the machine to the bottom portion using the "t" handle on the top portion. Then loosen the "star" threaded portion on the top and secure the arm to the shaft. Then snug it down.

Using the large ratchet, start the cutting process by turning it clockwise. As you turn the ratchet, you must also turn the "star". For every 4 complete turns on the ratchet, you must turn the "star" once. DO NOT OVER TIGHTEN THE STAR. You could break the bit, if you do over tighten and it seems to get tight, just back off the "star" a little bit and then resume the process.

Once you cut through the main ratcheting and "star" will become loose. Just keep on turning both until it gets snug and then you know you are starting the tapping phase. As you turn the ratchet, just keep the "star" close by, do not tighten the "star" as it can mess the threads you are making up. As you thread, look at top of the shaft but under the rachet and you will see a line grooved into the shaft. DO NOT THREAD BELOW THAT LINE. Stop just before the line.

As this whole process is taking place, the secure arm is still on the shaft stopping it from coming up. KEEP THIS ARM ON THE PROCESS.

Once threading is complete, back the shaft out by turning it counter clockwise with the rachet. When the shaft is backed out all the way, swing check valve up by the arm on the side of the bottom portion of the machine and release the pressure on the top portion of the machine by opening the petcock valve on the side of bottom portion of the machine. This will allow you to remove the top portion of the machine using the "t" handle.

Remove bit by loosening brass nut on side and tapping the knob on the side of the base. When bit comes out, place pin back against the base of the shaft.

On the quick release, you must install the corp. To do this you must thread the corp into the release. Making sure the corp is in the off position.

To install the quick release, just follow the same rules as the tapping bit.

Once the quick release is secured to the shaft, you can install it to the bottom portion the same way as before, with the “t” handle.

Once that is tight, you want to pressurize the top portion again. To do that simply close the petcock and swing the check valve arm down, keeping your face away from the shaft as it will rise.

When that is complete and everything is under pressure again, you can thread the corp in the same way as the bit. Use the secure arm on the shaft and turn clockwise until the corp is snug, DO NOT OVERTIGHTEN THE CORP AS YOU CAN STRIP IT OUT.

When you feel the corp is tight, just give the shaft a quick jerk in the counter clockwise way and it will release the quick release. Once again keep away from the shaft as it will rise.

Open the petcock valve on the side of the bottom portion to drain the cylinder.

Once the water is drained and the pressure is released, you can start to break down the machine opposite of the way you set it up.

Use the open end wrench to remove the bottom portion of the quick release off the corp being careful not to turn the corp.

You are ready to connect your water service!

Do not forget to clean the tap machine thoroughly!

Policy and Procedure for Case Backhoes

Check equipment for leaks, use a light, never an open flame or your hands.

Check the hydraulic system. Repair any leaks and fill to proper level.

Check engine oil level. Inspect all plugs, filler caps and other fittings for leaks.

Check for broken, missing or defective parts and have repaired.

Check tires for cuts, bulges, irregularities and abnormal wear. Check for proper inflation.

Check coolant level. WARNING: COVER RADIATOR CAP WITH A CLOTH BEFORE YOU OPEN IT. Release pressure before completely removing the cap. Never add coolant to radiator if the engine is hot.

Check fuel level. If fuel must be added, ground funnel or fuel nozzle against the filler neck to avoid sparks before starting the fuel flow. WARNING: NEVER FILL THE FUEL TANK WHILE SMOKING, WHEN NEAR AN OPEN FIRE OR WITH THE ENGINE RUNNING. Replace the fuel cap securely.

THOUGHTS BEFORE OPERATION

Know the work area.

Check the area for the location of underground cables, gas lines and water mains.

Know the clearances in the work area. Check clearance of overhead power and telephone lines. Never approach overhead or underground wires with any part of the machine unless proper, OSHA required, safety precautions have been taken.

Inspect any new work area and check for hidden holes, drop offs or obstacles that could be dangerous.

KEEP YOUR MACHINE CLEAN.

Clean windshield, mirrors and light lenses. Fasten doors or curtains. Visibility in all directions is of major importance. Check windshield wiper for proper operation.

Slippery surfaces are hazardous. Remove oil, grease or mud from grab irons, hand rails, steps, pedals and floor. In winter, remove snow and ice.

Remove or secure any loose items such as tools, chains or lunch buckets in the operators compartment. Lose items could jam a control or cause you to trip.

Walk completely around the machine to be sure there are no workmen next to, under, or on it. Warn workers and bystanders that you are starting up. Don't start until everyone is clear of the danger area.

STARTING AND TESTING

Always use handrails, ladders, or steps when mounting your machine.

SAFE STARTING

Always fasten your seat belt and adjust the seat for the most comfortable position. Controls should be in neutral or park position and parking brake set before starting.

Start the engine from the operator's seat only. Warn personnel in the area that you are starting up.

This is a one-man machine. NO RIDERS ALLOWED.

Always operate machine from correct seated position, NEVER from the ground.

Be sure driver is out of the cab before loading a truck. Never swing over the truck cab.

SHUTDOWN

Park your machine on level ground.

Always park in a non-operating area or a designated parking area.

Place transmission in neutral or park position.

Set parking brake.

Lower ladder bucket to the ground.

Lock backhoe in transport position or lower bucket to the ground.

Idle engine for gradual cooling, then stop engine.

Turn steering wheel back and forth and cycle hydraulic controls to dissipate residual pressure in the hydraulic system before leaving the machine.

Secure machine as instructed. Remove the key to prevent unauthorized starting and movement.

Dismount carefully. Be aware of slippery conditions on steps and on the ground.

Policy and Procedure for JCP Excavator

Check equipment for leaks.
Repair any leaks immediately before use.
Check all fluid levels make sure they are full, if not, top off.
Inspect tracks and entire exterior for any damage, if there is damage, report it to your supervisor immediately.
Inspect the interior of cab making sure everything is in proper working order.

THOUGHTS BEFORE OPERATING

Once on job site, know your area.
Know your clearances of the area. Check for overhead power lines and telephone lines.

Always operate on level ground to avoid rollover.
Inspect area for sudden drop offs or hidden holes.
Adjust all mirrors for maximum coverage of area.
While operating, be mindful of the clearance around the cab, because the cab rotates and changing conditions, care must be taken to avoid hitting personnel or equipment.
Never operate equipment unless you are properly trained.
Always lower bucket to a safe operating level when traveling.
Keep the interior of cab clean, any stray items in cab could jam a control or get wedged under brake pedal and also poses a tripping hazard.

OPERATION OF EXCAVATOR

Always fasten seatbelt.
Always start the engine from the operator's seat.
This is a one man machine, **no riders allowed**.
During operation, never extend the arm to an unsafe distance, this could create an unbalanced load, therefore it could tip the machine.
Use a spotter when possible, especially when loading and unloading the machine from the trailer.
Be careful dismounting the machine – use 3 point climbing method.
Once parked, lower bucket so it rests on the ground – **set emergency brake.**

Policy and Procedure for the JCP Loader

Check equipment for leaks. Use a light and never an open flame or your hand.
Repair any leaks and make sure the hydraulic levels are full.
Check engine oil.
Inspect and check tires for any cracks or excessive wear.
Check all fluids before operating.

THOUGHTS BEFORE OPERATING

Know your work area.
Know your clearances of the area. Check for overhead power and telephone lines.
Lower the front bucket to a safe operating level before moving. (**NEVER DRIVE WITH THE BUCKET RAISED**).
Inspect the area for any hidden holes or drop offs.
Make sure that you have been properly trained on the loader before operating.
Never operate a piece of equipment until you are trained by a qualified operator.

KEEP YOUR MACHINE CLEAN

Make sure that your windshield, lights and lens are cleaned. Check for worn or cracked wiper blades and ensure that they are operating properly.

Make sure the steps and grab handle is free from oils, grease and dirt. Slippery surfaces pose safety hazards. In the winter, remove snow and ice.

Keep the cab clean. Any stray items in the cab can jam a control, get wedged under a brake pedal, or even pose a tripping hazard entering or exiting the machine.

OPERATION OF THE LOADER

Always fasten your seat belt and adjust the seat to your most comfortable position. The control toggle switch should be in the neutral position and the emergency brake should be set before starting.

Always start the engine from the operator's seat.

This is a one-man machine. **NO RIDERS ALLOWED.**

When using the forks, never pick up a load more than what the loader can handle. An unbalanced, or too heavy of a load can cause serious damage to the equipment or could pose a serious threat of injury to the operator. Always use a spotter when using the forks to lift anything. Keep the spotter out of harms way. Always have a visual on them, knowing where they are at all times.

Driving the loader on the road, make sure all lights and signals are operating properly.

Keep the bucket at least a foot off the ground while driving to prevent you from hitting anything.

SHUTDOWN

Park the machine on the ground.

Place the loader in the neutral position, applying the emergency brake.

The bucket should be lowered completely to the ground.

Dismount carefully. Be aware of slipper conditions. Use the grab rail.

Procedure for Air Release Valves

To Start : 1 Close Valves # 1, 2 , & 3

2 Then open Valve # 1 and remove the air line from valve # 3.

3 Open Valve # 2 and blow out valve and line , Once blown out , close valve #2, then replace air line to # 3.

4 Repeat same sequence for Valve #3.

5 Close valve # 1 & 3 and then open Valve # 2 then close and repeat with Valve # 3 to bleed chamber.

6 Then intsall blowoff on top and slowly open valve # 1 to blowoff the chamber.

7 Once the chamber is blown off and sealed tight remove the blowoff and open all valves.