SECTION 1
The City of Portsmouth Safety Program

Introduction

The City of Portsmouth Safety Program is designed to accomplish one primary purpose, **TO PREVENT ACCIDENTS.** Preventing accidents results in saving lives, eliminating injuries, increasing efficiency of operations, and directly and indirectly saving thousands of dollars for both the municipality and its employees. This Safety Program provides not only for the safety of all employees, but also for the safety of the public in regard to the operations of the various departments.

To be successful, the Safety Program must have the continuous, active support of all employees and particularly of those in supervisory and management positions. The "push" for an effective Safety Program must come from the "top" person in each department, section, or crew. If a Department Head or Supervisor appears to be unconcerned about the Safety Program, this attitude will be adopted by their employees.

Remaining healthy and free from injury should be the goal of every employee. Time must be taken to assess each operation we do to determine the best and safest way to go about it. It is the responsibility of each and every employee to be as safe as possible each and every hour of every day. With the understanding that compliance with this program is mandatory and a condition of employment, it should become clear that safety is now a central part of the operation of all Portsmouth City services. This manual has been created to help us meet this goal. It has been published and will be updated to provide a readily available reference of written policies and procedures for the guidance of all personnel. **All** employees are responsible to abide by any and all applicable sections of this manual.

The intent of this manual is to comply with all Department of Labor standards designed for the protection of our employees. It is understood that the protective gear and devices will meet the minimum standards as set by the American National Standards Institute.

Mission Statement

The City of Portsmouth recognizes its employees as one of its most important assets. As such, Management has set a goal of providing a safe and healthful workplace for all employees. The City's Safety Program recognizes that the safe work behavior of each employee is the key for meeting this goal. Our ultimate goal is to achieve an accident free, healthy work environment for our employees.

To help meet these goals the City will provide on-going safety training to all employees based on the particular potential hazards of their job duties. We will also provide the necessary personal protective equipment to help reduce exposure to potential hazards and will allocate resources as needed to correct hazardous conditions that are brought to our attention.

It is the responsibility of each employee to follow all safe work rules and procedures. If an employee is unsure of how to do a particular task safely, they should not proceed until they have received instructions from their supervisor. Each employee is also obligated to report all unsafe working conditions to their supervisor and/or manager. It is the responsibility of each supervisor and/or manager to monitor and assist employees in the safe performance of their duties. Safe work behavior and attitudes are expected as part of each employee's job performance.

This Mission Statement will be reviewed and revised on an annual basis to allow the City of Portsmouth to meet the mutually beneficial goal of a zero workplace of injuries and illnesses.

Elements of the Safety Program

To ensure that the City of Portsmouth Safety Program remains effective, certain elements and objectives of the Program have been outlined. These are:

1. To assign safety-related responsibilities to personnel.

2. To ensure that personnel are assigned to jobs which they are physically qualified to perform safely.

3. To make equipment, work areas, and work methods safe.

4. To search out safety hazards and eliminate them immediately.

5. To encourage employee interest in safety and to maintain that interest.

6. To control the work habits of personnel by adequate and effective supervision.

7. To provide proper protective equipment and to make its use mandatory.

8. To educate and train employees as to the specific hazards of their jobs.

9. To investigate accidents in order to determine cause and then to take the action necessary to prevent their recurrence.

10. To prepare and maintain proper and complete accident records which will allow for evaluation of the Safety Program.

11. To adopt and enforce safety rules, policies and procedures.

SECTION 2
Responsibilities of Individuals

Department Head

Each Department Head shall have complete responsibility for the Safety Program within their department. In addition:

1. The Department Head shall ensure that employees are properly instructed regarding safe working methods and that Supervisors fulfill their assigned responsibilities in regard to safety instruction and responsibility.

2. The Department Head shall assure that required reports pertaining to injuries, vehicle accidents, and investigations are promptly prepared and forwarded for further processing.

3. The Department Head shall make frequent inspections of work areas for the purpose of discovering and correcting unsafe conditions or unsafe working practices.

4. The Department Head shall encourage employees to report immediately any unsafe conditions, equipment, etc., and shall take necessary action to correct same.

5. The Department Head shall require all personnel to obey safety rules, procedures and policies, and shall take or recommend appropriate disciplinary action whenever deemed necessary.

6. The Department Head shall require Supervisors to determine causes of accidents involving personnel or equipment under their supervision to prevent similar accidents.

Supervisors

The Supervisor is responsible to the Department Head for the Safety Program as it pertains to personnel and equipment under their supervision. The Supervisor is the "key person" involved in the Safety Program because they are in the best position to observe the work of the employees. Additional responsibilities include:

1. Giving job instructions to subordinates with special emphasis on the hazards of the work to be performed.

2. Constantly watching for and immediately correcting unsafe conditions and unsafe working practices as well as reporting to the Department Head those incidents which are beyond the scope of their authority to correct.

3. Promptly informing the Department Head of all accidents involving personnel or equipment under their supervision, and taking immediate steps to investigate each accident to determine its cause.

4. Assuring that proper action is taken any time an employee is injured. This includes:

a. Making sure that the injured employee receives appropriate medical attention, depending on the severity of the injury.

b. Completing any necessary forms, reports or other documentation related to the injury and treatment of the employee under their supervision. This includes, but is not limited to Workers' Compensation Forms and Accident Investigation Forms.

5. Enforcing safety rules, policies and procedures and making sure that protective equipment is worn as the hazards of the job dictate such use.

6. Actively promoting safety of all personnel, and informing all employees of their responsibilities as outlined below.

Employees

Each employee is always responsible for his/her own safety, the safety of fellow workers, and the safety of the general public with regard to the work being performed. In addition:

1. An employee shall be required to obey all safety rules, policies and procedures as a condition of employment.

2. An employee shall wear protective equipment such as goggles, hard-hats, etc., as deemed necessary by the Supervisor, Department Head, or as common sense dictates.

3. An employee, if injured on the job, shall be required to take the necessary action of:

a. **Promptly** giving verbal notice to Supervisor of any injury received while on the job REGARDLESS of the severity of the injury or whether or not medical attention is Required.

b. Filing with the Supervisor, within 24 hours following any accident or injury, a written report of the accident. (See next section for further detail)

4. An employee shall promptly inform the Supervisor of any unsafe equipment, unsafe tools or other hazardous conditions.

SECTION 3
Accident and Incident Reporting

Any injuries to any employee or citizen, any damage to private or City property due to City operations must be reported as soon as possible to the immediate supervisor of the employee involved. If an incident does not result in immediate damage or injury, but in the best judgment of the City employee is likely to result in a liability to the City, the incident must be reported.

For the purpose of making the reporting of accidents or incidents as easy as possible, they have been grouped into four categories. These categories are:

A. Accidents Causing Personal Injury (Non-Motor Vehicle)

B. Accidents Causing Property Damage

C. Motor Vehicle Accidents/Incidents

D. Exposure to Infectious or Contagious Disease

Accidents Causing Personal Injury (Non – Motor Vehicle)

1. Accidents which occur causing personal injury to a City employee, or a third party on City property, or due to City of Portsmouth operations shall be fully investigated and the proper forms submitted.

2. If the accident does not reflect immediate injury but, in the best judgment of the employee, complications are likely to occur in the future, it shall be fully investigated and all forms must be submitted.

3. The employee **must:**

a) Inform his/her supervisor immediately after the accident or injury has occurred.

b) Fill out the **Notice of Accidental Injury or Occupational Disease Form (8A WCA)** of the Department of Labor for the State of New Hampshire.

This must be filled out within 24 hours of the injury so that it can be signed by the Department Head and submitted to the Human Resource Department, who then submits it to the insurance company and the Department of Labor within 5 working days.

c) In the event that a City of Portsmouth employee witnesses an injury to a non – City employee which is due to City of Portsmouth operations, the City employee **must** report the event to his/her supervisor.

4. The supervisor **must:**

a) Completely fill out the **Employer's First Report of Injury or Occupational Disease Form (8WC)** or, in departments where there is an assigned person to handle filing of these forms, work with that person to ensure it is completed.

This form is then submitted immediately to the Human Resource Department so that it can be sent the City's insurance carrier and the Department of Labor within 5 working days of the reported injury.

b) Fill out the **Supervisor Accident / Incident Investigation Report Form** within 24 hours of the initial report as accurately as possible so as not to leave questions as to what actually happened.

The purpose of this form is to determine What Happened, Why it Happened, and How to prevent it from happening again. This form will have the completed Employee's Report form attached, and the whole package will be approved by the Department Head and submitted to the Human Resource Department.

c) Fill out the **Employer's Supplemental Report of Injury Form (WCA)** from the Department of Labor, and submit it to the Human Resources Department immediately upon receiving knowledge that the employee will remain out of work for 4 or more working days due to an occupational injury or disease.

d) Upon the injured employee's return to work (if the leave was 4 days or longer), notify the Human Resource Department by use of the **Employer's Supplemental Report of Injury (WCA).**

e) When a subordinate has reported witnessing a non-City employee receive an injury due to City operations, fill out a **Supervisor's Accident/Incident Report Form.**

f) Make sure that any forms which are required by his/her own department's standard operating procedures, in addition to those mentioned in this Section, are filled out and distributed accordingly.

Exposure to Infectious or Contagious Disease

Note: Just being in close proximity to the infected person does not necessarily determine an exposure. If unsure, check with the Occupational Health Nurse to determine if an exposure occurred.

A. The supervisor will:

a) Complete the **Employer's First Report of Injury or Occupational Disease (8WC)** which is then submitted immediately to the Human Resources Director so that it can be sent to the City's insurance carrier and the Department of Labor within 5 working days of the reported injury.

b) Complete the **Notice of Accidental Injury or Occupational Disease Form (8A WCA)** of the Department of Labor for the State of New Hampshire.

Accidents Causing Property Damage

A. The supervisor will:

a) Complete the **City of Portsmouth Supervisor's Accident / Incident Investigation Report Form** within 24 hours of the initial report. This will be approved by the Department Head and submitted to the Human Resources Department.

Make sure that any forms which are required by his/her own department's standard operating Procedures, in addition to those mentioned in this Section, are filled out and distributed.

Motor Vehicle Accidents / Incidents

In the City: Radio or call your department to report the incident, request Police, Ambulance (if needed), and Public Works wrecker (if needed); and notify your supervisor.

Out of the City: Report accident to local or State Police. Contact the Public Works Department and your supervisor for instruction if vehicle is inoperable.

A. Due to the potential for claims against the City of Portsmouth, **all** motor vehicle accidents, no matter how small, must be reported using the appropriate City forms.

B. The **employee** operator will:

1. Complete an Accident Loss Investigation Report, which should be located in the glove compartment of City vehicles. This will be filled out within 24 hours of the accident and submitted to his/her supervisor for review. In addition, the driver must adhere to current State of New Hampshire, Department of Safety rules and regulations concerning reports to the Motor Vehicle Department.

2. Complete the **Notice of Accidental Injury or Occupational Disease Form (8A WCA)** if an injury occurred as a result of the accident. This form will be signed by the Department Head and submitted to the Human Resources Department.

3. Ensure that the Public Works Garage is notified to restock the involved vehicle with another Vehicle Accident Report Kit.

C. The **supervisor** will:

1. Complete a **City of Portsmouth Accident/Incident Investigation Report Form within 24 hours** notice of the accident, attach it to the Vehicle Accident Report Kit that was filled out by the employee, have it approved by the Department Head, and send it to the Human Resources Director.

2. Follow procedures outlined in the "Personal Injury Accidents "Section of this manual if an injury resulted from this accident.

D. The **Police Department** will:

1. Investigate all motor vehicle accidents where there is personal injury and/or property damage of $1,000 or more. They will fill out a **State of New Hampshire Uniform Police Traffic Accident Report Form** for any accidents which meet the above requirements and which occur within the City limits.

Subsequent Reports

Verification of Statements

1. Whenever an employee claims to have been injured in the course of their employment, the City is obliged to provide, if necessary, an initial medical examination to determine whether or not the injury
was, in fact, received as a result of employment.

2. When the Supervisor is not an actual eye witness to an accident resulting in an injury, he/she shall make every effort to verify the statements of the injured employee as part of the accident investigation procedure to assure that:

a) The injury occurred on the job, and

b) Circumstances described by the injured employee are correct.

3. If there is reason to doubt statements made by the injured employee, or evidence indicates that all or part of the statements are false, the employee will be informed of these findings.

4. If the employee persists in claiming that the injury was job connected, a Workers' Compensation Report must still be submitted. The Supervisor or Department Head will also attach a memorandum to the report detailing the reasons why he/she believes that the employee's statements are not correct.

5. Employees who make false statements concerning job injuries (which statements can be documented as being false), are subject to dismissal from their jobs as well as being held liable for the repayment of any **compensation** or medical payments received by them in connection with the injury.

SECTION 4
Guidelines for Conducting Investigations

A. Purpose

Accident investigation is important and necessary if future accidents are to be prevented. Investigations are primarily concerned with finding the "cause" of the accident and are not necessarily concerned with fixing "blame".

Investigations must be kept objective, factual, and free from the "punishment" motive, otherwise, they will do more harm than good. This is not to say that responsibility may not be fixed where personal failure has caused the accident, or that such person should be excused from the consequences. Investigations also provide information through which recommendations for corrective action can be developed. Corrective action may involve additional training, mechanical revision, direct supervision or enforcement measures.

B. Principle Purposes for Accident Investigation

1. To determine the cause of an accident so that similar accidents may be prevented through mechanical improvement, better supervision, and/or employee instruction.

2. To publicize the particular hazard among employees and their supervisors and to direct attention to accident prevention in general.

3. To determine facts bearing on legal liability.

C. Cases to be Investigated

1. Every accident which results in death, disabling injury or property damage shall be investigated.

2. Near-accidents or accidents resulting in non-disabling injuries should also be investigated because they are equally important from a safety standpoint. An accident that results in only slight injury to a person may easily result in death to the next person.

D. Persons Making Investigations

1. Department Heads

a) Department Heads are responsible for immediately notifying the Human Resource Director whenever a "lost-time" injury occurs.

b) Every accident will be formally investigated. Investigation of all accidents and injuries shall be made by the Department Head, their designee, the Supervisor or a member of the Departmental Safety Committee.

2. Supervisors

a) A supervisor shall be required to investigate and document every accident and near-miss which involves personnel or equipment under their supervision. This should be for the purpose of taking or recommending
corrective action, or preventing recurrence of similar accidents.

E. Procedures for Making Investigations

Each investigation should be started as soon as possible after the accident. A delay of only a few hours may permit important evidence to be destroyed, or removed, intentionally or unintentionally.

The following guides are to be used by persons conducting investigations:

1. Arrive at the Accident Scene Promptly.

In order to obtain facts while they are still fresh, investigators should arrive at the scene as soon as possible after an accident has been reported.

2. Conduct Interviews With Involved Parties.

The injured person, the supervisor and all witnesses will be interviewed to obtain results, and allow each person to relate what happened in his/her own way.

3. Note Conditions and Evidence

Record information as to conditions present at the time of the accident. These could relate to weather, mechanical defects, or other unsafe working conditions. Also note any physical evidence that is available. If possible, photographs should be made of the scene.

4. Note Any Reference to Unsafe Acts

Note any reported unsafe acts that may have contributed to the accident.

F. Reports of Investigation

Written reports of investigation will be as complete as possible, preferably in narrative form. The report should include information that would answer the following questions:

1. WHO was injured or WHAT was damaged?

2. HOW did the accident happen?

3. WHERE and WHEN did it happen?

4. WHO saw it happen?

5. WHAT persons, equipment, materials and conditions were involved?

6. WHY did the accident happen?

The investigator must be particularly thorough in determining the WHY of each accident. For example, in the case of an employee receiving an eye injury, the investigator might list the cause as "failure to wear goggles". The WHY of this accident is: Why didn't the employee wear goggles? Were goggles available?
If so, was the employee instructed to wear them? If so, why wasn't the employee wearing them?

7. WHAT could and should have been done to prevent it and similar accidents?

Section 5
Fundamentals of Accident Prevention

Fundamental Activities for Accident Prevention

Successful Accident Prevention Requires a Minimum of Three Fundamental Activities:

a) A study of all working areas in order to detect, eliminate, or control physical hazards which contribute to accidents.

b) A study of all operating methods and practices.

c) Education, instruction, training and discipline to minimize human factors which contribute to accidents.

Accidents are preventable, and the identification, isolation and control of the causes of accidents are the underlying principles of all accident prevention techniques. No person in a supervisory position can be effective in the job of accident prevention without being convinced that accidents can be prevented and without a constant striving to prevent accidents in their immediate supervisory area.

1. Control of Accident Causes

There are four main methods utilized in the control of accident causes. These are sometimes referred to as "The Four E's of Safety" and are outlined below:

To be completely effective, accident prevention controls cannot be applied "hit or miss." All controls will be directed toward the solution of specific problems which are based on a collection of facts relating to unsafe acts or unsafe conditions.

A. Engineering

Environmental causes of accidents or unsafe conditions can be eliminated through the application of engineering principles.

- When an operation is mechanically and physically safe, it helps reduce the risk of unsafe acts by employees. Machines are less apt to fail than humans.

- It may be necessary to make mechanical revisions or modifications to eliminate existing unsafe conditions and, in some cases, to prevent unsafe acts

- Design of machine guards, pressure relief valves and hand rails are all examples of safety engineering

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B. Education and Training

Just as safety engineering is the most effective way of preventing environmental accident causes (unsafe conditions), safety education is the most effective tool in the prevention of human causes (unsafe acts).

- Personnel will gain useful knowledge and develop safe attitudes through adequate instruction in safety principles.

- Safety consciousness developed in personnel through education will be supplemented and broadened by specific, additional, instruction in safe working habits, practices, and skills.

- **Training** gives each employee a personal safety tool by developing in them habits of safe practice and operation. **This is very important!**

C. Enforcement and Supervision

Usually accidents can be prevented through adequate safety engineering and education. However, there are some employees who are a hazard to themselves and co-workers because of their failure to comply with accepted safety standards.

- Strict enforcement of safety practices is imperative, as accidents are frequently the direct result of violations of safety principles. This is particularly true of vehicle accidents, many of which are caused by unsafe acts constituting violations of traffic laws.

- Department Heads and Supervisors are responsible for enforcing safety standards and regulations. Failure to do so, in some cases, would be condoning conduct which may lead to an accident which otherwise would have been preventable.

- Employees who fail to comply with components of this Safety Program, as outlined in this manual, may be subject to disciplinary action as referenced in the City of Portsmouth Employee Manual and Union Contracts.

D. Elimination of Unsafe Conditions

One of the most effective ways of preventing accidents is to eliminate unsafe conditions. To talk safety while unsafe conditions exist and remain unaddressed will obviously create a barrier to employee understanding of, acceptance of, and cooperation with the program.

1. Supervisor Involvement

- The supervisor must take the initiative in safety-related matters. This should be done without instruction from higher authority.

- The principle goal of the supervisor should be to search out hazardous conditions and eliminate them BEFORE they cause work interruption or injury.

- If the elimination of an unsafe working condition is beyond the supervisor's authority, it is his/her responsibility to bring it to the attention of the Department Head.

2. Procedures for the Elimination of Unsafe Conditions.

- Remove all obstacles and impediments to the safe movement of personnel, vehicles or machines

- Repair damaged floors, broken steps, broken glass, and cracked walls and ceilings.

- Replace worn or damaged tools.

- Install and maintain guards for moving parts of machinery, fans, etc.

- Provide protective equipment such as goggles and hard-hats.

- Insist on good housekeeping practices – remove debris, waste material and obsolete or useless equipment.

- Replace worn electrical wiring and fixtures

- Post signs warning of hazards in certain areas.

2. Safety Orientation of New Employees

Attitudes Which Promote Safety Consciousness

a) It is imperative that proper attitudes about accident prevention and safety be exhibited to all new employees by the Department Head, Supervisor and fellow employees.

b) The new employees must be told that unsafe workers and work habits **will not be tolerated.** New employees should be told that they will always be required to obey safety rules and instructions, wear protective equipment whenever required, and attend safety meetings. These are necessary conditions
which must be met in order to continue their employment with the City of Portsmouth.

Previous Experience is Never an Adequate Substitute for Proper Instruction

a) It will never be taken for granted that the previous experience and apparent qualifications of the new employee mean that "somewhere along the way" they have learned to do their job in a safe manner.

For example, a driver's license plus many years of driving experience does not automatically exempt a newly hired vehicle operator from being thoroughly instructed in safe driving practices.

The new employee must be made aware of what is expected of them in their capacity of operating a City vehicle, and they must be checked to assure that this role is understood.

The Supervisor Will Do Review and Follow up with the New Employee

a) The supervisor will meet with the new employee, being sure to point out the possible hazards involved in doing the job.

b) If possible, the new employee should be assigned to work with a safety-minded employee during the first few weeks on the job.

c) The supervisor will check on the new employee at frequent intervals.

- The new employee will be asked about any problems that may have arisen.
- The new employee will be reminded of safe work practices.
- The new employee will be promptly and vigorously warned by his/her supervisor with regard to any tendency of overlooking safety procedures.

3. Control of Work Habits

Regardless of the degree of safety built into the job, unsafe actions on the part of human beings will always be a cause of injuries. Teaching employees good work habits means showing them how to do their tasks with less risk to themselves, less spoilage of materials, and less damage to equipment.

1. Showing the "why" as well as the "how".

a) An employee, from time to time, may need to be reminded why a safety procedure is in place. It may be necessary to insist that an employee repeat a certain step or work practice to stress the seriousness with which safe practices are regarded by the department.

b) Demonstrations of "right" and "wrong" ways of performing tasks should be conducted as a basis for showing **how** one work habit is preferred over another.

2. Providing Adequate and Constant Supervision

3. Implementing Disciplinary Action for Failure to Comply

a) When the right way has been presented and agreed to by the individual workers, it is essential that failure to comply be noted. No matter how skillful an employee may be in performing his duties, if they are not performed safely, the employee will not be performing acceptably.

b) Flagrant or repeated disregard of safety rules should be met with appropriate disciplinary action, including discharge if necessary.

SECTION 6

General Safety Practices

1. Personal Protective Equipment

It is the responsibility of the Department Head of his/her designated representatives to determine by examination of the job description to see which employees are exposed to hazards and see that they are afforded proper safety equipment.

A. Eye Protection

- Goggles face shields, or other suitable eye protection shall be required for wear by employees whenever there is danger of exposing the eyes to flying particles, chemical substances, harmful light rays, dirt or grease falling from under vehicles or other conditions considered harmful by the Supervisor. Employees who wear corrective lenses should be required to use goggles over their corrective lenses.

- Suitable eye protection devices will be purchased and furnished by the department.

- Eye and face protection should be selected for the hazards anticipated while the while the work is being performed.

B. Head Protection

- Approved hard hats shall be furnished to and shall be worn by personnel who are working in and around areas where there is a possibility of head injury from impact, falling or flying objects, or from electrical shock or burns.

C. Hand Protection

- Employees may be required to use appropriate work gloves in completing their duties.

- Specialized hand protection such as rubber gloves, welding gloves, etc., shall be furnished by the department.

D. Foot Protection

- Employees are required to wear safety shoes whenever they are working in an area where heavy objects, machinery, tools, or other potential hazards pose an increased risk that foot injuries may occur.

E. Clothing

- Employees are required to dress appropriately. Standard dress will be trousers and shirt. Shorts and T-shirts may be worn in certain circumstances.

F. Specialty Protection

- Some work environments require the use of special personal protective equipment such as:

1. noise limitation
2. respiratory protection against dust, fumes, vapors, smoke etc.
3. safety belts and life lines
4. self contained breathing apparatus and
5. complete coverage of exposed skin in certain cases.

2. Prevention of Lifting Injuries

The common types of injuries due to lifting are: (1) back strain, (2) hernia, and (3) muscle strains and sprains. These injuries can be the result of an over-stretching of certain muscles and generally can be avoided by the following proper lifting techniques and use of proper equipment.

A. Do Not Attempt to Lift More Than You Should

- Never pick up anything that is too bulky or heavy for one person to handle. Get help when needed.

- Use tools such as chain falls, hand trucks, hoists, levers, power loaders, manhole cover lift system, etc., when possible rather than lifting by hand.

- Never pick up an object with a sudden jerking motion. Avoid lifting and twisting in a single motion.

- Always keep the load close to the body. Avoid over extension.

B. Lift Objects Properly

- Plan your lift, and make sure that your travel path is clear.
- Get a good footing. Place feet about a shoulder width apart.

- Get a firm grip. Balance the load.

- Bend at the knees to grasp the weight. Get a good position over the load.

- Maintain the natural curve of the back. **Lift with the legs and all the muscle groups.**

- Look at the load and tuck in the chin to keep the neck and spine aligned.

- Lift gradually by straightening the legs. Bring the load close to the body as you lift.

C. Practice Preventative Strategies To Keep Yourself Physically Fit

- Get proper rest

- Maintain correct weight and good dietary habits

- Quit smoking

- Participate in a regular program of exercise, like the City's Wellness Program.

3. Good Housekeeping Practices

Good Housekeeping shall be of primary concern to all Supervisors and their employees.

- Housekeeping shall be a part of the daily routine with cleanup being a continuous procedure.
- Work areas shall be kept clear of waste or loose materials, especially in the vicinity of doorways, stairs, ramps and ladders.
- Obsolete and unusable equipment shall not be allowed to accumulate around City buildings. This includes scrap lumber, debris and spare parts.

4. Office Safety

A. Office Furniture Should Not Become a Hazard in the Workplace

- An open drawer in a desk or cabinet is a hazard which can cause you or others to trip or collide. Please keep drawers and cabinet doors closed when not in use.
- Do not tilt or slump back in chairs, the added strain could cause them to break or slip, causing injury.
- If you must reach high or climb, use a safe ladder. **Do not use a chair for climbing**, or stand on drawers, cabinets or boxes.

B. Electric and Electronic Equipment Should be Monitored for Safety.

- Do not attempt any electrical repairs.
- Make sure that typewriters and computers are properly fixed in place, and that cords are arranged to prevent them from creating a tripping hazard.
- When using extension cords, place them so they do not lie in a traffic area (tripping hazard) or through doors which may cut the cord (electrical or fire hazard).Do not overload electrical circuits.
- Do not remove the ground prong from a three prong plug. Electrical equipment with a three prong plug requires a three-hole (grounded) receptacle. If an adapter must be used to accommodate a two prong receptacle, have maintenance personnel assure that the adapter is properly grounded.

C. Practice the Basic Principles of Safety

- Walk, don’t run
- Do your reading at your desk, not while walking
- When using stairways, take your time and use the handrails.

- Don’t stand in front of a closed door which might open suddenly.

- **Smoke in authorized areas only,** and use ash trays, not wastebaskets.

- Sharpened objects such as scissors, letter openers etc., should always be faced down to prevent puncture wounds.

5. Building Maintenance

- Always practice good housekeeping in the workplace. Poor housekeeping breeds fire. All storage areas should be kept neat with cardboard boxes, paper and other combustible materials being removed to safe storage bins immediately.

- When replacing bulbs or fluorescent tubes, be sure that bulbs or tubes are properly locked in place and that globes and fittings are secure. Be aware that defective fluorescent tubes may contain powder which can be harmful or fatal.

- Replace broken windows and door frames promptly, and do not place broken glass in trashcans or wastebaskets which are accessible to other employees or the public.

- Always place adequate warning signs when cleaning floors, stairways, etc., Wet or slick floors, stairways or handrails can cause accidents.

6. Garage and Shop Safety

General Principles of Safety

- Ensure that there is proper ventilation. Guard against carbon monoxide gas from the exhaust of running engines.

- Keep a pair of safety goggles handy and wear them when doing work in which eye protection is needed.

- Always keep a suitable fire extinguisher near at hand and ready to use.

- Keep aisles open on the floor free of tools and parts

- Be sure your feet are clear of passing automobiles or moving machinery when you get under a car, truck, or piece of equipment.

- Never allow grease or oil to remain on a floor where you or others might slip on it and fall.

SECTION 7

Fire Prevention

A. General Information

All employees should be fire conscious and take all necessary precautions to prevent fires from starting due to carelessness and improper handling of matches, cigarettes, and other combustible items. In regards to this, some of the responsibilities of the Department Heads, supervisors and Safety Representatives are as follows:

a) Instructing all employees working in a building in the proper procedure for evacuating the building, reporting the fires and operating First Aid and Fire Fighting equipment.

b) Ascertain that buildings or offices are free from fire hazards such as trash, rubbish, and paper, paying particular attention to flammable liquids.

c) Insuring that boiler rooms are not used for storage.

A survey of the effectiveness of fire prevention activities should be made periodically. If any findings are negative, corrective action should be taken.

Throughout this handbook, fire prevention measures are given for various on-the-job activities. Observe them. In case of fire, **DO NOT PANIC….. KEEP CALM**

You Should:

1. Already be familiar with basic fire prevention guidelines.

a) Know where fire extinguishers are located in your work area and know how to use them. Extinguishers should be used only on incipient (beginning) stage fires.

b) Have a plan for exiting your work area in case an emergency evacuation is ever called for. It is also a good idea to have an alternate plan in the event your first route of exit is blocked.

2. Know What to do in Case of Fire

a) Sound the alarm so that evacuation may begin immediately.

b) Call the Fire Department.

c) Stay out of the heat and smoke. Protect yourself from heavy smoke by covering your nose and mouth with a cloth (wet if possible) and move as closely to the floor as possible.

d) If the fire is small, fight it:

- Keep near a door for your escape
- Use the proper type of extinguisher to fight the fire

  Use water extinguishers on paper, wood and cloth fires.

  Use dry chemicals or CO2 extinguishers on gasoline, oil, grease, or other flammable chemicals and electrical fires.

- Aim the extinguisher stream at the base of the fire.

- Stay outside of closets and small areas and shoot extinguisher stream at the fire.

- When the fire is out, leave the area. Close the doors. The Fire Department will assure that the fire is out and that the area is safe to re-enter.

- If despite your efforts, the fire increases or the smoke becomes increasingly thicker, **leave the area.** Do not take unnecessary chances.

3. Help Facilitate a Quick and Effective EVACUATION of the area.

a) Know and follow the evacuation plan for your work area. A large fire or explosion may necessitate a change in the plan. Keep calm and follow the instructions of the emergency or Supervisory person(s) directing you to the safest exit.

b) When evacuating a building, turn off (unplug ,if possible) any electrical equipment in use, close all windows, turn off lights, and close all doors as you leave.

c) Elevators are not emergency exits and **should never be used in case of a fire!**

d) WALK quickly to the exits. Once outside, move a safe distance away from the building to allow the fire fighting equipment unhindered access to the building.

e) Do not attempt to move vehicles away from the building unless so directed by your Supervisor, Fire or Police officials.

f) Do not re-enter the building until Fire officials declare that it is safe to do so.

4. Remember that EACH FIRE IS DIFFERENT.

a) ELECTRICAL FIRES

- Unplug electrical equipment, or turn off current at the box. Do not attempt to extinguish an electrical fire. The potential for an electrical shock is too great.

- Use CO2 or dry chemical extinguisher. Never use water on an electrical fire, because of the risk of an electric shock.

b) CLOTHES FIRES

- Do not let a person whose clothes are on fire run, it just fans the flames. Remember the rule: STOP, DROP, and ROLL.

- Smother the fire by rolling the victim up in a rug, blanket, canvas (be sure there is no oil or grease on it), or a heavy coat. As the victim is rolled in the smothering material, make sure that his/her head is not covered up.

- Get medical attention for the victim immediately. Treat for shock.

c) CAR/TRUCK ENGINE FIRES

- Be aware that vehicle fires can accelerate rapidly. Materials used in vehicle interiors may give off toxic fumes. If a fire cannot be easily extinguished, get away from the vehicle.

- Shut off the engine and disconnect the battery if possible.

- Use a dry chemical or CO2 extinguisher.

- Beware of spilled gasoline.

d) OUTSIDE FIRES – grass, leaves, brush, etc. Fight this type of fire with teamwork.

- Rake, dig or wet down a four (4) feet wide "fire break" between the fire and the endangered buildings and equipment.

- Working along the edge of the fire, knock down flames with shovels and water.

- Have someone follow to put out sparks.

- Do not take chances; always have an escape route open.

5. Remember these Five Basics if a Fire Occurs:

a) Keep Calm, Do Not Panic, but move quickly!

b) Sound the alarm

c) Call the Fire Department.

d) Evacuate the area

e) Fight a small fire. Use good judgment. Do not endanger yourself or others. Your safety and the safety of your co-workers is foremost.

FIRE PREVENTION MEASURES

1. Smoke only in designated outside areas. Smoking should be prohibited in all areas where flammable or combustible materials are stored.

- Wastebaskets are not ashtrays. Do not discard smoking materials into a wastebasket at any time.

- Do not empty ashtrays into wastebaskets at the close of a workday.

2. Unplug electrical coffee pots, hot plates and like appliances at the end of each workday.

3. Turn off electric typewriters and like electrical equipment when not in use and at the end of the workday.

4. Avoid overloading electrical circuits. If it is necessary to use triple or four way sockets for commonly used electrical equipment in the office, then more circuits are necessary.

5. Extension cords can be a hazard especially when stapled, run under rugs or through doorways. Request additional circuits.

6. Use portable electric heaters with great care. Avoid placing such appliances near combustibles. Unplug electrical heaters at the end of the workday.

7. Flammable or combustible materials should be properly maintained and stored.

- Keep storage of combustible materials to a minimum. Remove trash, cardboard etc., daily.
- Sweep workplace and remove dust, shavings and sawdust daily.
- Dispose of oily, solvent or paint covered and gasoline covered rags in metal covered containers only.
- Flammable cleaning fluids and gasoline for edgers and lawn mowers should not be stored in buildings occupied for offices, public assembly and like uses. Only enough fluids for immediate usage should be kept on hand in work areas.
- Flammable liquids should only be stored in metal cans. Safety cans are required for gasoline.
- Be careful that light bulbs do not come in contact with combustibles in storage areas. Combustibles should be placed no closer that 18" from light bulbs.
- Packages containing paints, varnishes, lacquers and other flammable paint materials should be kept in a well ventilated area free from excessive heat, smoke sparks, flames or direct rays from the sun.
- Adequate ventilation, either by mechanical or open air means should be provided so that toxic fumes can be easily removed from the work area. When toxic materials are being used, a sufficient supply of fresh, clean air should be made available in the work area and/or filter type respirators should be made available to the workers.
- Drums, barrels or other flammable liquid containers should be kept tightly capped. This precaution applies to empty as well as filled containers at all times except when being filled or emptied. In buildings, shops or rooms where flammable liquids are handled or stored, self closing safety cans equipped with a flame arrester should be provided and maintained in good condition.
- Personnel should be cautioned carefully against any part of their clothing becoming contaminated with flammable fluids. It is very important that they not be allowed to continue work when their clothing becomes so contaminated.
- **No one** should be permitted to handle or use flammable liquids until he/she has been fully instructed in safe handling and use thereof.

PLAN: There are two basic fire-related situations that may happen in the City Hall Buildings in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Pull the nearest fire alarm pull station. This action will sound all alarms in the building and automatically notify the Fire Department.

3. If the nearest exit is too smoky for passage, use alternate exit.

4. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

5. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble at the flag pole area with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire alarm

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble at the flag pole area with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be sent out prior to the alarms sounding. Only if you have received an announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(PWD)

PLAN: There are two basic fire-related situations that may happen in the Public Works Department Buildings in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Dial 770 and announce “Fire” and location.

3. Notify the Fire Department.

   a. by calling 9-911 if situation safely permits
   or
   b. pull the nearest pull station

or

c. utilize radio system to speak with dispatch.

4. If the nearest exit is too smoky or blocked by fire, go to an alternate route.

5. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

6. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

7. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

8. Assemble at the back gate with other people from your department.

9. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire announced

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble at the back gate with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be announced over the PA system <u>prior</u> to the alarms sounding. Only if you have heard the PA announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Madbury)

PLAN: There are two basic fire-related situations that may happen in the Madbury site in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Announce "fire" to other people in the building.

3. Notify the Fire Department.

   a. Dial 862-1212
   or
   b. dial 9-911 if situation safely permits
   or
   c. use radio from vehicle to dispatch at Public Works Department.

4. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

5. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble in a group at a safe area outside with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire announced

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble in a group at a safe area outside with other people from your department.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(WWTP Pierce Island)

PLAN: There are two basic fire-related situations that may happen in the WWTP Buildings in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of fire or smoke

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Pull the nearest fire alarm pull station. This action will sound all alarms in the building and automatically notify the Fire Department.

3. If the nearest exit is too smoky for passage, use alternate exit.

4. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

5. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

6. Assemble in a group at a safe area outside with other people from your department.

7. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire alarm

1. Immediately **evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. Close all doors behind you as you exit.

5. Assemble in a group at another building or at the entrance gate of WWTP with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be announced over the PA system prior to the alarms sounding. Only if you have heard the PA announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Pease WWTP)

PLAN: There are two basic fire-related situations that may happen in the Pease WWTP in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of fire or smoke

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Announce "fire" to other people in the building.

3. Notify the Fire Department.

   a. by calling 9-911 if situation safely permits
   or
   b. Pull the nearest pull alarm station located at Fire Station #3, 127 International Drive.

or

c. utilize radio from vehicle to dispatch at Public Works Department.

4. If the nearest exit is too smoky for passage, use alternate exit.

5. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble in a group at safe area outside with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire announced

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. Close all doors behind you as you exit.

5. Assemble in a group at safe area outside with other people from your department.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Library)

PLAN: There are two basic fire-related situations that may happen in the Public Library Building in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Pull the nearest fire alarm pull station. This action will sound all alarms in the building and automatically notify the Fire Department.

3. If the nearest exit is too smoky for passage or blocked by fire, use alternate exit.

4. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to ht hallway, go to a window, open the window and call for help.

5. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble across the street with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire alarm

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble across the street with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be sent out prior to the alarms sounding. Only if you have received an announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Spinnaker Point)

PLAN: There are two basic fire-related situations that may happen in the Spinnaker Point in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Pull the nearest fire alarm pull station. This action will sound all alarms in the building and automatically notify the Fire Department.

3. If the nearest exit is too smoky for passage, use alternate exit.

4. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to ht hallway, go to a window, open the window and call for help.

5. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble across Spinnaker Way and across from the entrance of the Spinnaker Point building with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire alarm

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble across Spinnaker Way and across from the entrance of the Spinnaker Point building with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be announced prior to the alarms sounding. Only if you have heard the announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Connie Bean Center)

PLAN: There are two basic fire-related situations that may happen in the Connie Bean Center in which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of **fire** or **smoke**

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Pull the nearest fire alarm pull station. This action will sound all alarms in the building and automatically notify the Fire Department.

3. If the nearest exit is too smoky for passage, use alternate exit.

4. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to ht hallway, go to a window, open the window and call for help.

5. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped?

6. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

7. Assemble near the front doors of the US. Post Office across Daniel Street with other people from your department.

8. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire alarm

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

5. Close all doors behind you as you exit.

6. Assemble near the front doors of the US. Post Office across Daniel Street with other people from your department.

NOTE: If at anytime, the fire alarm system is being worked on, a notice will be announced over the PA system prior to the alarms sounding. Only if you have heard the PA announcement and there is no sign of smoke or fire should you stay at your work area.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

(Indoor Pool)

PURPOSE: To provide a plan of action for dealing with an emergency situation to protect life and property at the Portsmouth Indoor Pool.

To familiarize employees with the emergency plan in order that they will be able to deal with an emergency situation in a safe and efficient manner.

PLAN: There are two basic fire-related situations that may happen in the in Portsmouth Indoor Pool which the staff must react. They are discovery of a fire or smoke, or hearing the fire alarm sound. This plan also relates to emergencies requiring evacuation of the building(s).

PROCEDURE:

Discovery of fire or smoke

Upon discovery of a fire, smoke or suspicion of a fire in the building:

1. Immediately **EVACUATE** all employees and visitors in your area in an orderly manner using the nearest exit.

2. Announce "fire" to other people in the building.

3. Notify the Fire Department.

a. by calling 9-911 if situation safely permits
or
b. pull the nearest fire alarm box located at the front of the High School, or on the Church of Later Day Saints on Alumni Drive.

4. If the nearest exit is too smoky for passage, use alternate exit.

5. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to ht hallway, go to a window, open the window and call for help.

6. DO NOT use an elevator as a means of exit as a power failure could cause you to be trapped.

7. If the fire is wastebasket size or less and all people in the area are able to evacuate the building without assistance, you may attempt to extinguish the fire with a portable fire extinguisher. If the fire increases in size, close the door(s) behind you and evacuate the building.

8. Assemble at the High School Main Entrance with other people from your department.

9. When the Fire Department arrives, be sure to notify them of the location of the fire.

PROCEDURE:

Upon hearing fire announced

1. **Evacuate** all employees and visitors from your area by the nearest exit.

2. If nearest exit is too smoky or blocked by fire, go to an alternate exit.

3. If you are unable to get out of your work area to any exit due to fire or smoke, close the door to the hallway, go to a window, open the window and call for help.

4. Close all doors behind you as you exit.

5. Assemble at the High School Main Entrance with other people from your department.

INDIVIDUAL RESPONSIBILITIES

1. Be calm.

2. Avoid panic.

3. Do not run.

4. Become familiar with the nearest and alternate exits from the area(s) in which you work.

SECTION 8

Tool Standards and Specifications

A. Proper Use of Tools

Accidents often result from improper use of tools or the use of defective tools and equipment.

1. Supervisors Should Assure That Tools and Equipment are in Good Condition.

- Tools which develop defects while in use shall be removed from service, tagged and not used until they have been reconditioned.
- Impact tools such as chisels, drills, hammers, and wedges with mushroom heads shall not be used until they have been reconditioned.
- Hammers, axes, shovels and similar tools shall not be used if the handles are cracked, loose or splintered, or which otherwise present a hazard.
- Shovels, picks, and similar tools shall not be handled in such a manner as to endanger other workers nor shall they be left lying in such a manner as to cause other persons to trip.
- Where proper and safe tools are not available for the work at hand, the employee should report this fact to the Supervisor.

2. Supervisors Should Assure That Tools are Not Misused by Employees.

- Sharp edged or pointed tools shall have the edge or point guarded at all times when not in use. Shovels and rakes left on the ground shall have sharp or pointed edges placed toward the ground.

- All electric power hand tools shall be properly grounded. If the power cord attached to the tool does not have a three pronged plug, the tool shall be grounded by attaching one end of a wire to the metal frame of the tool and the other end to a grounded structure. Never remove a ground plug from an electric plug.

- Extension cords shall not run across walkways, or through oil or water. Cords will be inspected frequently for kinks, worn insulation, and exposed strands of wire. Cords found to be defective must be replaced. Ground Fault Circuit Interrupters (GFCI's) must be used in damp or wet areas.

- Tools, equipment and materials shall not be thrown or dropped from one employee to another or from one level to another, but shall be transferred from hand to hand by use of a hand line or other similar safe method.

- Tools are to be carried in a tool box, bag, or tool belt and not in pockets or pants belt. This is especially applicable to pointed or edged tools.

- Tools lying around benches, near machines, and on floors cause accidents (and get lost!) Tools are to be returned to kit or storage when no longer needed.

- Tools should not be left on scaffolds, ladders, or overhead work spaces when not in use. When work is being performed overhead on scaffolds or ladders, containers should be used to hold tools and prevent them from falling.

- Only non-sparking tools should be used in locations where sources of ignition may cause a fire or explosion.

- **Proper Personal Protective Equipment should be used when working with hand or power driven tools.**

B. Use of Hand Tools

1. Wrenches

- Be sure wrenches are adjusted to fit tightly, or are the correct size open-end or box wrenches.

- Pull, don't push when using a wrench.

- Don't tighten a nut or bolt too much. You may strip the threads or snap the bolt.

- When stooping and using a wrench or when using a large wrench on heavy work, brace yourself to avoid slipping or being thrown off balance. When using a wrench lying on your back, don't let it slip and hit your face.

- Open end and adjustable wrenches which have defects such as worn threads spread jaws, etc., shall not be used as they are likely to slip.

- Don't use a pipe or other wrench extension to increase leverage. This often causes stripped threads, broken bolts, slipping of the pipe from the wrench, and broken wrenches and fingers.

- When pulling on a wrench above you, stand out of its line.

- Place wrenches so that the pull will be on the stationary jaw.

2. Screwdrivers

- Don’t use screwdrivers with broken or rounded points or bent shafts.
- When using a screwdriver, place work on a solid object, never hold it in the palm of your hand.
- Keep the screwdriver shank lined directly over the screw head.
- Never use pliers or wrenches on the shanks of screwdrivers unless they are designed for that use.

3. Hand Saws

- Use each type of saw only for the purposes for which it is intended. Keep saw teeth sharp and the teeth properly set.
- Start the cut carefully so that the saw will not jump and strike you. When starting cut, hold rip saws at 60 degree angle with board, cross cut saws at 45 degree angle. Start with partial cut, then saw at proper angle. Check material being cut for nails, knots, and other objects that may damage saw and cause it to buckle.
- Be sure that the materials to be cut are firmly supported and secured. When sawing horizontally, cut on the side opposite the direction in which you want the cut off parts to fall.

4. Chisels

- Hold the chisel in your fingers with a steady but relaxed grip. Keep your eyes on the cutting edge and not the chisel head.
- Clamp small pieces in a vise before chiseling them. Chip towards the stationary jaw of the vise. Chip away from yourself. Do not hold stock in your hand.
- Wear goggles when working with a chisel.

5. Punches

- Keep the points of center punches ground and the faces of starting and pin punches square.
- Don’t use center punches on materials hard enough to dull or shatter the points.
- Be sure punches are held firmly in position before striking, especially on round surfaces. Strike lightly at first, then increase the force.

6. Files and Rasps

- Files and other tools with pointed tongs shall be equipped with suitable handles.

- Cut only in the forward direction. Ease pressure on the backward stroke. When teeth become clogged, clean them with a file card.

- When storing files or rasps in tool boxes, wrap each tool with cloth or paper.

- Don't use files or rasps on materials that are too soft or hard. Hard objects wear the teeth smooth. Soft objects clog the teeth. Smooth cutting faces may cause the tool to slip suddenly and injure you.

- Never hammer on files or rasps or use them as pry bars chisels or punches.

- When filing small objects, use a vise.

7. Hack Saws

- Place the blade in the frame so the teeth point toward the end of the frame and away from the handle. Tighten the blade rigidly.

- Cut away from yourself, and cut with long smooth strokes, using almost the whole blade. Relieve pressure on the backward stroke.

- Judge cutting speed by the hardness of the metal. Forty to fifty strokes per minute is right for metals of average hardness. A faster rate may ruin the blade.

- Don't saw objects that are too hard. Test objects for hardness with the front or rear of the blade.

8. Pliers

- Use pliers only when no other tool will do the job.

- Don't use pliers as wrenches.

- Use cutting pliers only for cutting soft metals, never on hardened metals or as nail pullers.

- When cutting wire that is under tension, protect yourself so that the wire can't fly back and strike you.

9. Axes and Hatches

- Check the ax head to make sure that it is sharp and has no defects. A dull ax will often glance off the wood and strike the user.

- Make sure that the ax head is securely attached to the handle.

- A narrow ax with a thin blade should be used for hard wood and a wide ax with a thick blade for softer wood.

- Ax blades should be protected with a sheath or other guard. An ax with a single blade should be pointed down when being carried.

- To start the cut with a hatchet, it is a good practice to strike the wood lightly, then force the blade through by striking the wood against a solid block of wood.

- Using a hatchet or ax to drive nails is a poor practice.

- Sledge hammer heads should be "dressed" if they begin to check or mushroom.

- A sledge hammer too light that it bounces off the work is hazardous; likewise one too heavy is hard to control and may cause body strain. Select one with the proper weight for the work to be done.

10. Picks and Shovels

- Pick handles should be free of splinters, splits and cracks and have heads securely fastened to the handle. Shovel blades should be sharp and free of jagged and split edges.

11. Jacks

- Make sure the jack has the correct lifting capacity rating for the job. Never use a jack about which you have any doubt.

- Make sure that the footing is substantial and level, use boards and blocks at right angles to the lift.

- Position the jack so there will be an unobstructed swing of the handle, thus protecting your knuckles.

- Never leave a jack standing under a load with the handle in the socket; something might strike it and knock the jack out of position.

- Make sure that all jack lifting loads are braced diagonally, so that the jacks cannot tip over.

- Before jacking a vehicle, set the hand brake and chock the wheels so that the vehicle will not roll.

- Never rely on jacks alone to support any load you work under. Use plenty of substantial blocking – have an ample factor of safety. If jack stands are used, inspect them before use and position them properly to support the vehicle. It is advisable to shore up any load that must remain in a raised position for any length of time.

- Lubricate jack frequently and store where protected from moisture and damage.

C. Use of Power Tools

1. General

a) Know your power tool

- Read owner's or operator's manual carefully

- Learn the tool's applications and limitations, as well as the specific potential hazards peculiar to it.

- Use the proper tool for the job you are doing. Don't force a small tool or attachment to do the job of a more powerful tool. It will do the job safer and better at a rate for which it was designed.

2. Use Common Sense

a) Ground all electrical tools – unless double insulated

- If tool is equipped with a three-pronged plug, it should be plugged into a three-hole (grounded) electrical adapter.

- If an adapter is used to accommodate a three-pronged receptacle, he adapter wire must be attached to a known ground.

- Never remove the ground prong from a three-prong plug.

- If working in a damp or wet area, a ground fault interrupter must be used.

b) Maintain a safe working environment.

- Keep work area clean. Cluttered areas and benches invite accidents.

- Avoid the use of electrical power tools in damp or wet environments.

- Maintain proper footing and balance at all times. Don't allow debris to accumulate underfoot.

c) Dress appropriately for the job.

- Loose clothing or jewelry which may get caught in moving parts should not be worn.

- Rubber gloves and footwear should be used when working outdoors under wet weather conditions or wet soil conditions with an electrical tool (don't forget the GFCI!)

- Use safety glasses and a face or dust mask if the cutting operation is dusty.

d) Treat the tool properly

- Never carry a tool by its cord, or yank it to disconnect it from a receptacle.

- Keep the cord away from heat, oil and sharp edges.

- Keep guards in place and in working order.

- Keep tools sharp and clean at all times for the best and safest performance.

- Disconnect tool when not in use or if you leave the work area.

- Use clamps or vise to hold work. It's safer than using your hands and it frees both hands to operate the tool.

- Don't carry a plugged-in tool with your finger on the switch.

- Don't use electric tools in the presence of flammable gases or vapors.

- Always examine both the cord and connections of an electrical power tool before using.

- Remove adjusting keys and wrenches; see that keys and adjusting wrenches are removed from the tool before connecting tool to the source of power.

D. Guidelines for Specific Electrical Tools

1. Portable Electric Saws

- All saws should be equipped with a fixed guard over the upper half of the blade, and a movable blade guard covering the lower half. Both of these guards must be left in place. Locking open the lower guard is prohibited.

- Small pieces being cut should be secured by bench clamps or some other means.

- Saw blades should be regularly checked and kept in good condition. Blade use should be as recommended for the material being cut. Saws should not be jammed or crowded into the work. Green or wet material should be cut slowly and with great caution.

- Operators exposed to dust, as when cutting concrete, tile, lead, or stone should wear approved-type respirators.

- Check all material for knots, nails, etc.

2. Table or Bench Saws

- The operating table and surrounding area should be kept clean and free of debris

- Lathe guards complete with splinter and non kick-back attachment should be in place and operate freely.

- The blade should have a self-adjusting guard which retracts as the material is fed in.

3. Drills

- Always provide a crick punch or pilot hole for the drill point. Always select the correct bit for the material being drilled. If the bit is long enough to pass through the material, protect against damage or injury on the other side.

- Small pieces should be secured to prevent spinning the drill.

- Care should be taken to prevent sleeves and other clothing from being wrapped around the drill.

4. Bench or Hand Grinders

- Wear goggles or a face shield and check that hood guard is in place.
- Wheels should be inspected regularly. A cracked wheel may fly to pieces and should be discarded.
- Wheels of the proper RPM ratings should be used, and that the grind stone is proper for the work being done.
- Do not strike the wheel suddenly or use too much pressure.
- Work or tool rests should not be adjusted while the grinding wheel is in motion. Tool rests on power grinders should not be allowed to be more than 1/8 inch distant from the wheel.

5. Sanders

- The abrasive wheel or disc cannot be guarded so the only way of avoiding injury is to use caution.
- Sanding motion should be away from the body.
- Dust may create an explosion hazard and should be exhausted where possible. Open flames and sparks should be avoided. Respirator and eye protection measures should be taken.

6. Power Saws

- Portable Circular Power Saws should be equipped with guards that automatically and completely enclose the cutting edges when not actually sawing.
- Cracked, bent or damaged blades should not be used
- Power saws should not be left running while unattended, and the switch should be locked to prevent unauthorized use.
- When ripping short stock, a pusher stick should be required.
- The piece being cut should be firmly held against the rip fence or guide. All material should be cut in a single steady pass. It is dangerous to stop the saw for any reason until the cut is completed. If this is done for any reason, the blade should be turning freely and at full speed before the cut is resumed.
- When cutting a warped board, be sure that it is touching the table top at the line of cut.
- On the conventional table saw, a long fence is necessary. A helper should be provided to assist in handling long stock.
- Extension tables should be provided for radial and table saws. Power saws should be locked out when leaving the work area.

9. Woodworking Machinery

- Safe means shall be provided for the removal of sawdust, chips and shavings of all woodworking machinery.

- A mechanical or electrical power control should be provided on each machine, in a protected position to prevent accidental starting and to enable the operator to cut off the power without leaving his position at the point of operation.

- Circular rip saws should be provided with hoods, guards, splinter and anti-kick back devices. All circular saws should be provided with hood guards.

- The peripheral length of circular saws and cutters beneath tables should be guarded, or the sides of the table enclosed.

- Blades of planers and joiners should be fully guarded and have cylindrical heads with throats in the cylinders.

- All swing cut-off radial saws or similar machines which are drawn across a table should be equipped with limit stops to prevent the cutting edge of the tool from extending beyond the edge of the table or the table edge shall be extended beyond the limit of the saw blades.

- Band saws and other machinery requiring warm up for operation should be permitted to warm up before being put into operation whenever the temperature is below 45 degrees Fahrenheit.

- Band saw blades should be fully enclosed except at point of operation.

- The use of cracked, bent, or otherwise defective parts such as saws, blades, cutters, and knives is prohibited.

10. Use of Chain Saws

- Never work alone, but make sure that other employees are a safe distance away from the running saw.

- Wear proper personal protective equipment including eye protection, hearing protection, safety shoes, gloves and hard hat.

- Always carry the saw with the engine stopped, guide bar and saw chain to rear, and the muffler away from the body.

- Make sure the chain brake is in good condition, and never operate the saw without the chain brake.

- Never operate the saw with an excessively loose chain, and make sure the chain is not touching anything before starting.

- Stand at engine end of the running saw, keeping body parts away from the saw chain.

- Always hold the saw below waist high, and avoid “running “chain contact. Adjust the clutch and carburetor to prevent this.

- Never cut with the tip of the blade.

When felling a Tree:

- Wear a hard hat. Inspect the tree for dead branches which may fall during the cut.
- Warn others in the tree fall area and never fell trees within 150 feet of other operations, unless adequate warning precautions have been taken.
- Undercut 1/3 diameter of the tree on the side to which you want it too fall. Back cut about 2" above undercut and do not cut through to the undercut, but leave some hinge wood.
- Shut off engine and move 10 to 20 feet away from the base along your cleared route.

11. Pneumatic Tools

- Safety clips or retainers should be installed on pneumatic impact tools to prevent dyes and tools from being accidentally expelled from the barrel.
- Pressure should be shut off and exhausted from the line before disconnecting a line from any tool or connection.
- Air hoses should be suitable to safely withstand the pressure for which they were intended; leaky or defective hoses should be removed from service.
- Hoses should not be laid over ladders, steps, scaffolds, or walkways in such a manner as to create a tripping hazard. Air supply lines carried overhead or vertically should be supported.
- The use of compressed air for blowing dirt from hands, face, or clothing is very dangerous and prohibited unless a safety nozzle is used to reduce the pressure to less than 30 p.s.i..
- Protective eye equipment should be worn when air activated tools are used.
- Fire precautions should be observed in connection with the operation of compressors.

SECTION 9

Vehicle Standards and Specifications

All motor vehicles, automobiles and trucks, should be operated only by individuals who are duly licensed, have the ability and experience to handle the vehicle properly, and have the proper authorization to do so.

The driver of the vehicle has the prime responsibility for the vehicle and any passengers. He/she is charged with the safe transport of cargo and other individuals on the vehicle. He/she is also responsible for the vehicle itself.

A. Heavy Equipment

1. General Safety

- All repairs on machinery or equipment should be made at a location which will provide a safe place for repairmen. Heavy machinery, equipment or parts thereof, which are suspended or held apart by the use of slings, hoists or jacks should also be substantially blocked or cribbed before employees are permitted to work underneath or between them.

- All blades will be lowered to rest when not in use.

- All modifications, extensions, replacement parts, or repairs of equipment should maintain at least the same factor of safety as the original design equipment.

- Operators should always check to make certain that other workers are clear before starting the machine.

- Employees should not jump off or onto machines while in motion.

- Before repairs are made on any equipment, the operator should make sure that the motor is not running Motors on all equipment should be stopped before refueling is started.

- Equipment should be driven entirely off the road at night

- Unauthorized riding on equipment should be prohibited.

- The operator should never leave his machine on an incline surface or on loose material with the motor idling because vibration could put the vehicle into motion.

- All moving equipment should be equipped with a reverse signal alarm which will operate automatically with backward motion. The alarm should give an audible signal above surrounding noise levels. Exceptions may be made for light service trucks.

2. Bulldozers and Tractors

* The condition of the equipment should be checked before operating. This should include brakes, clutches, steering mechanisms, hydraulic and electrical systems. Any defect should be immediately reported to the supervisor or maintenance man for correction.

- Before starting down a hill, the blade should be lowered to secure a load of earth in front of it and maintain the load all the way down the hill. If the load is lost, the blade should not be jammed into the ground as this may cause overturning. The dozer blade must never be used as a brake on downhills.

- Filling operations can be very dangerous. The material should be pushed over to the edge only as far as is necessary. This should prevent the possible overturning of the machine.

- At the end of the work shifts, or when leaving the machine, the power should be shut off; the brakes should be set, blade landed, and the shift lever placed in neutral.

3. Shovels, Clam Shells and Graders

- All workers should be clear of the bucket swing and the cab rotation. Never swing the bucket or clam shell over other workers.

- When the soil is soft, make sure the equipment is on solid foundation, such as heavy planking, with outriggers fully extended before starting to operate.

- Before operating on a bank next to an excavation, a check should be made to determine whether shoring or bracing is necessary.

- Never operate closer that ten (10) feet from overhead electrical wires or be certain that the power is temporarily shut off and locked out.

- No one should be permitted in the cab with the operator.

- Make sure the bucket is kept on the ground or on blocking when not in operation. Never leave the cab while master clutch is engaged or machine is idling.

4. Forklift Trucks

All operators must be trained before operating any lift.

Forklift trucks, no matter how they are powered, are to be operated according to accepted safety standards, such as:

1) Not allowing riders on the vehicle

2) Traveling with the forks in the lowered position

3) Operating at a low speed

4) Avoiding over loading.

B. City of Portsmouth Vehicles

The following is a guideline pertaining to the use of motor vehicles owned by the City of Portsmouth.

1) Reckless driving will never be tolerated, even on emergency calls.

2) Use of City vehicles will always require the permission of a Supervisor, or the City Manager.

3) City Vehicles are not to be used to conduct personal business.

4) Permissibility of passengers in City of Portsmouth vehicles:

City personnel shall not allow any non-City employee to ride with them in any City vehicle without
First securing the permission of the City Manager or from the Department Head except as follows:

I) Officers or employees of the City of Portsmouth offering authorized assistance to an officer or employee to whom a vehicle has been assigned in his/her performance of official City business; or

ii) Persons taken into custody or persons necessary to aid in the investigation which is being made by a police officer; or

iii) Emergency situations in which it is reasonably impracticable to obtain prior permission.

5) All City of Portsmouth employees are required to wear seat belts while operating or riding in **any vehicle while on City business.** This applies to City vehicles, personally owned vehicles, as well as vehicles owned by others, regardless of the presence of any supplemental restraint system.

In addition, passengers in vehicles operated by City staff while on City business are required to wear seat belts.

City employees are forbidden from disengaging or otherwise disarming automatic seat belt systems or alarms.

6) Except in extreme emergencies, personnel are forbidden to leave vehicles unlocked, running or with the keys in the ignition when the vehicle is not in use and the unit is left unattended.

7) All City of Portsmouth vehicles must have the City seal affixed to said vehicle. (Policy #94-37)

8) Operators of City owned vehicles should complete a vehicle checklist to detect deficiencies in or on the vehicle that could cause or contribute to an accident/injury.

The vehicle driver is responsible for the following and should be held responsible for them:
a. Check all light devices and reflectors, for operation, broken or dirty lenses.

b. Check audible warning device.

c. Check windows and mirrors for cracked or broken glass and wipe clean.

d. Check operation of windshield wipers and defrosters.

e. Check tires for safe operation and control of vehicle.

f. Check for gasoline, oil and hydraulic leaks.

g. Check operation of other auxiliary equipment.

h. Check for loose or damaged parts on the vehicle that could become a safety hazard if not corrected.

Check lists should be provided so that the operator can effectively communicate the vehicle shortcomings and have them repaired as soon as possible

The driver should report to the appropriate supervisor any shortcomings and discrepancies that he/she has encountered during the operation of the vehicle so that they can be corrected or repaired as soon as possible.

The responsible supervisor should have corrected all vehicle shortcomings and discrepancies as quickly as possible to prevent serious accidents to operators and machines.

All City vehicles are to be equipped with the following safety devices:

a. fire extinguisher

b. First Aid kit

c. flares or reflectors

9) All City of Portsmouth vehicles should be inspected according to current State of New Hampshire safety standards. Any vehicle that is deemed unsafe, for passengers or cargo, should not be allowed on the roadway, until such unsafe conditions have been eliminated or repaired. A tag should be affixed to the steering wheel labeling the vehicle as being unsafe to operate.

10) For motor vehicle accident procedures, consult with Section 3 of this manual.

SECTION 10
Welding Standards and Specifications

A. Welding and Cutting

1. Gas

- Valve caps should in place and secure when not in use.
- Cylinders should not be intentionally dropped, struck or permitted to strike each other violently.
- Valve covers should not be used for lifting cylinders.
- A suitable holding device, cylinder truck and chain, should be used to keep cylinders from being knocked over.
- When cylinders are empty or when they are no longer to be used, the cylinder valve should be closed.
- Cylinders should be stored in an upright position and secured from falling.

2. Use of Gas Cylinders

- Cylinders should be far enough away from the welding area so that sparks, hot slag or flame will not reach them.

- Cylinders should not be placed where they can become part of an electrical circuit.
- Cylinders, either empty or full, should not be used as rollers or supports.
- The gases should not be used for any other purpose than those intended by the supplier.

3. Operation

- The operator should be thoroughly instructed in the safe use of the gases before he/she attempts to use them.
- Before attaching the regulator to the cylinder, it should be “cracked” to clear the valve of dust or dirt. This should be done away from open flames and not pointed at other workers standing in front of the cylinder.
- Valves should be opened slowly to prevent damage to the regulator.
- When a special wrench is required, it should be left on the valve stem for quick shut-off in an emergency.
- If leaks develop around the valve stem or other connections, the unit should be shut off and the gland nuts and fittings tightened. If tightening does not stop the leak, the unit should be removed from the work area and properly tagged.

4. Manifolds

- Manifolds should be stored in a safe, well ventilated area.
- Hose connections should not be made to be interchangeable and should be free of grease and oil.
- Manifolds should be capped when not in use.

5. Hose

- Separate hose, easily distinguishable, should only be used for this operation.
- All hose should be inspected at the start of the shift and throughout the shift to detect broken or cut hose and should be removed from service if found to be defective.
- Couplings should be of the type that cannot be unlocked by means of a straight pull.

6. Torches

- Clogged tips should be cleaned with suitable wires or drills.
- Torches should be inspected at the start of the shift and throughout the shift for leaks.
- Torches should be lighted by friction only.

7. Safety

- Appropriate gloves, apron, goggles, or other protective apparel must be worn by the operator when he/she is engaged in this type of gas work.
-

B. Arc Welding

Arc Welding should be performed by persons who are well acquainted with the equipment and who have experience and ability to understand and operate the required equipment.

1. Holders, Cables and Connectors

- Only electrodes which are specifically designed for arc welding capable of handling the maximum current rating of the machine should be used.

- All cables and connectors should be completely insulated to the maximum current rating of the machine.

- The portion of the holder that is gripped should be fully insulated to the maximum rating of the machine.

- Cables in poor repair should not be used.

- When it becomes necessary for cables to be spliced together, the splice should be a minimum distance of 10 feet from the cable end to which the electrode holder is connected.

2. Machine Grounding

- The ground return cable should have a current carrying capacity equal to or exceeding the maximum output of the welder.

- Pipelines containing gases or flammable liquids or conducts containing electrical currents should not be used as a ground return.

- All welding machines should be grounded either by a third wire in the cable containing the conductor or through a separate wire which is grounded at the source of the current.

3. Safety

- Persons operating welding equipment should wear the appropriate head and eye protection, gloves, aprons and other apparel as required.
- Means should be provided to protect the eyes of other workers in the area by shields, guards or screens that will completely block out the sight of the direct rays of the arc in the welding operation. Non-essential personnel should be excluded from the actual work area.

- Fire protection equipment should be readily available.

- Near-by workers should be protected from the dangerous bright flame radiation.

SECTION 11

Worksite Standards and Specifications

A. Excavations and Shoring

- Before attempting to excavate, Dig Safe must be called.

- Excavations if over five feet in depth, unless in solid rock, hard shale, hardpan, cemented sand, and gravel, or other similar materials, should either be shored, sheeted and braced, or sloped to the mangle of the repose. All shoring and bracing should be designed so that it is effective to the bottom bracing of the excavation. Sheeting, sheet piling, bracing, shoring, trench boxes, and other methods of protection, including sloping, should be based upon calculation of pressures exerted by the condition and nature of the materials to be retained, including surcharge imparted to the sides of the trench by equipment and stored materials.

- Materials used for sheeting and sheet piling, bracing, shoring, or underpinning, should be in good serviceable condition and timbers used should be sound and free from large or loose knots.

- Excavated or other material should not be stored nearer that two feet from the edge of any excavation and should be so stored and retained as to prevent its falling or sliding back into the excavation and to prevent excessive pressure from the sides of the excavation.

- Sides and slopes of excavation should be maintained in a safe condition by scaling, benching or barricading.

- Foundations, adjacent to where an excavation is to be made below the depth of the foundation, should be supported by shoring, bracing or underpinning as long as the excavation remains open.

- Additional precautions, by way of shoring or bracing, should be taken to prevent slides or cave-ins, where excavations or trenches are made in locations adjacent to backfilled excavations, where subjected to vibrations from railroad or heavy highway traffic, the operation of machinery or other sources.

- Temporary guard rails or barricades and red lights or torches maintained from sunset to sunup, should be placed at all excavations which are exposed to paths, walkways, sidewalks, driveways, and thoroughfares.

- Where employees are required to be in trenches, ladders extending from the floor of the trench excavation to at least three feet above the top of the excavation should be provided and so located as to provide a means of exit without more than twenty five feet of lateral travel.

- Trenches and ditches over which people and equipment are required or permitted to travel should be provided with walkways or bridges with guardrails.

B. Signals, Warning Signs and Flaggers

1. General

Hand signals should be used when vehicles are being backed into a holding area. This would apply to any vehicle where the driver cannot safely back the vehicle and observe what is directly in back of the vehicle.

2. Signals

- A uniform signal system should be used on all operations of similar nature. Signals in use should be posted at the operator's position, signal control points, and such other points as necessary to properly inform those concerned.

- Where manual hand signals are used, only one person should be designated to give signals to the operator. The guide should be so located as to be clearly visible to the operator at all times.

3. Flaggers

- Only persons who are dependable and fully qualified by experience with the operations being directed should be used as flaggers.

- A flagger should be provided when the point of operation is not in full or direct view of the machine or equipment operator. Exception should be made only when an adequate mechanical signaling or control device is provided for the safe direction of the operation.

4. Signs

- Warning signs should be placed as necessary to provide proper adequate warning of hazards to workmen and the public. Signs should be removed as soon as the hazard has been eliminated.

- Traffic control signs are of most value if they conform to standard highway signs for shape and color. Danger signs should be used only where an immediate hazard exists. The predominate color should be red.

5. Flag Person's Instructions

- Individuals should be assigned as flag persons to protect other workers while performing in the roadway and to protect the driving public.

The following instructions should be observed:

a. They should be able to see the people and equipment at work or know what they are doing if they are out
of sight.

b. They must be seen by approaching traffic soon enough so that the driver will be able to safely stop.

c. The supervisor should tell them were to stand. Generally, they should be facing traffic on the right edge of the traveled way.

d. In the daylight, use a paddle or sign. At night, use a red lantern or white flashlight with a wand at least six inches long.

e. While the flagger is on duty, he/she should wear an orange hat and vest.

f. The flagger should not leave the post unprotected. They are responsible for the protection of their fellow workers.

g. To slow daytime traffic, extend the paddle vertically with the STOP side visible to the driver. Before the vehicle comes to a complete stop, rotate the paddle to show the SLOW side. For added protection, the free hand may be raised and lowered with the palm down.

h. To stop daytime traffic, extend the paddle vertically with the STOP side visible to the driver. Look at the driver and raise the free hand with the palm facing the driver to indicate that the vehicle is to come to a complete stop.

i. For traffic to proceed, show the SLOW side of the paddle and with the free hand motion traffic to proceed.

j. The night-time procedure is the same as the daytime except that a red wand on a flashlight should be used to attract attention. The area where the flagger is located should be well lit.

C. Ladders and Scaffolding

1. Ladders

Ladders present one of the major hazards in construction work, and their improper use is one of the major causes of serious accidents.

Causes of ladder accidents are:

a. ascending or descending improperly
b. failure to secure ladder at top and/or bottom
c. structural failure of the ladder
d. carrying objects in hands while ascending or descending

2. Use

The foot of the ladder should be placed approximately ¼ of its supported length away from the vertical plane of its top support. Only light, temporary work should be performed from ladders.

Workers should be cautioned about the danger of trying to reach too far from a single setting. The workers belt buckle should never extend outside of the ladder side rails.

Ladders should not be placed in front of doors which open toward the ladder unless the door is locked or otherwise guarded.

Ladder feet should be placed on a substantial, level base, and the area in the vicinity of the bottom should be kept clear.

Both the top and bottom of the ladder should be secured to prevent displacement. Use ladder shoes, stakes, or other forms of securing.

Ladders leading to landings or walkways should extend at least 42 inches above the landing and be securely fashioned. Long ladders should be braced at intermediate points as necessary to prevent spring.

All metal ladders are electrical conductors. Their use around electrical circuits of any type, or places where they may come in contact with such circuits, is not recommended. Metal ladders should be marked with signs reading "**Caution – Do Not Use Around Electrical Equipment."**

3. Step Ladders

The ladder should be equipped with an automatic locking device or spreader to hold it in the open position. Step ladders should always be used in the open position, and not used as straight ladders. **Workers should not work from the top step of a step ladder!**

4. Scaffolds

a. Footings – Firm footing must be provided for each upright; a metal plate is most satisfactory and may be provided with scaffolding. If it is necessary to supplement this plate with planking, the minimum thickness of lumber recommended for this purpose is two inches. Footings should be secured against movement by staking or other means.

b. Uprights – All uprights must be plumb. For scaffolds less than 75 feet high, a minimum outside diameter of 2 inches is recommended for tubing. For scaffolding above this height, the uprights should be in accordance with manufacturer's recommendations.

c. Platforms – All load carrying timber members of scaffold framing shall be a minimum of 1,500 f. (stress grade) construction grade lumber. Platforms should be constructed of 2x10 wood planks. All planking shall be Scaffold Grade as recognized by grading rules for the species of wood used. As most ledgers will be of single members, platform planking will be lapped for continuity. All lap joints should be made at ledgers, with a minimum twelve inch lap of each side of ledger member. An access ladder or equivalent safe access shall be provided.

d. Guard Rails and Toe Boards – Guardrails not less than 2 x 4 inches or the equivalent and not less than 36 inches or more than 42 inches high, with a mid-rail, when required of 1x4 – inch lumber or equivalent, and toe boards, shall be installed at all open sides on all scaffolds more than 10 feet above the ground or floor. Toe boards shall be a minimum of four inches in height. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard Wire one-half-inch mesh or the equivalent, where persons are required to work or pass under the scaffold.

e. Bracing – Tubular scaffold uprights are generally, much smaller in diameter than timber posts for the same size scaffold. It is **very important** that: 1) uprights be erected and maintained in a vertical plumb position, and 2) diagonal bracing be provided.

Exterior scaffolds should be tied or anchored to the building at a height of three times the narrowest width and every two sections, thereafter as a minimum. As work progressed upward and platforms are removed, it is important that all ledgers be left in place to provide rigidity. If

scaffolding is tied into masonry construction, all ledgers should be securely set into vertical masonry joints by means of a suitable clincher plate, with a minimum thickness of 3/16 inch.

SECTION 1
Fired Pressure Vessels

1. Boilers (Fired Vessels)

A. Operators

All boiler operators should be experienced and competent in boiler operation and maintenance. They should be provided with and be familiar with the boiler manufacturer's operation and maintenance manual for the boiler being operated.

B. Cut-offs

All suspended, fuel fired boilers shall be equipped with low water fuel cutoffs that will automatically shut off the burners in the event the water level drops below the safe level stipulated by the boiler manufacturer. They shall be of the manual reset type so that an operator will first check the reason for the low water cut-off prior to refiring the boiler.

C. Switches

All suspended fuel fired boilers shall be equipped with upper limit pressure and temperature switches that will automatically shut off burners if pressure or temperature limits, as set by the boiler manufacturer, are exceeded. These switched shall be of the manual re-set type, so that an operator will first check the cause of an upper limit having been reached

D. Controls-

All suspended fuel fired boilers shall be equipped with electronic combustion controls, including pilot and main burner flame detection systems. These controls shall automatically program a burner system for proper start-up, including purging and flame monitoring so as to automatically shut off burners if improper furnace conditions exist on start up, ignition, and main flame firing. Furnace shall be properly purged at least five furnace volumes before any relighting is attempted after any burner shut down or loss of flame.

E. Valves

Each boiler shall be equipped with an ASME approved safety relief valve, properly stamped for pressure and capacity. This pressure and capacity shall match the allowable working pressure for the boiler, and the capacity rating for the boiler.

Safety relief valves will be tested manually by means of the testing lever at least once a week on construction sites, but preferably daily at the beginning of daily operations. If a safety relief valve does not operate or malfunctions, operate boiler with continuous operator attendance, watching pressure gauge, and immediately get safety relief valve repaired or replaced.

SECTION 13
Safety Program Activities

A. Joint Loss Management/Labor Committee

The successful Safety Committee helps to plan the Safety Program and takes part in making the program operate by:

1. Receiving Suggestions and Recommendations.

   a. Recommendations submitted to Committee by employees or committee members.
   b. Discussion and acceptance, modification or rejection by the Committee.
   c. Accepted recommendations submitted to Head of Department.
   d. Head of Department submits written reply to Committee regarding actions taken on recommendations.

2. Reviewing all accidents, both vehicle and personal injury.

3. Investigating all complaints pertaining to employee safety.

4. Recommending training programs for employee groups.

B. Safety Meetings

Purpose of Safety Meetings

Safety Meetings are an integral part of the City of Portsmouth's Safety Program. Their function is:

1. To arouse and maintain interest in accident prevention.

2. To develop attitudes sympathetic to the Safety Program.

3. To educate employees in every factor entering into the safe performance of their job duties.

Scheduling of Safety Meetings

The frequency of Safety Meetings to be held will be determined by the individual Department Heads.

Subjects Which Should Be Covered

1. Safety Meetings should pertain to safety matters wherever possible with the exception being for brief announcements or discussions of interest to all employees which are necessary from time to time.

2. Emphasis should be on safety education and training. Some of the most important subjects which should be covered are listed below. They need not be taken up in the order given, but those

which are pertinent to the most serious problems of the particular group should receive primary attention.

1. Accidents

a) Thorough coverage of accidents that have occurred within the departments with emphasis being on cause and procedures for preventing recurrence.

b) What to do in case of an accident.

c) Procedures for reporting accident and/or injuries, etc.

2. Unsafe Acts or Unsafe Conditions

Discussion into any unsafe acts or unsafe conditions that have been noted.

3. Other Safety Related Topics

Discussions or talks on falls, safe lifting, motor vehicle safety, artificial respiration, tool safety, materials handling, good housekeeping, fire prevention, use of personal protective equipment, home safety, etc..

C. Training Program

In order to assume success, a regular training program for departments should be well planned. A training program that is not well planned will result in poor reception by employees and the end result could be worse than if there had been no training at all.

1. One or more persons should be designated as being responsible for planning the safety training program in each department.

2. A variety of unique teaching/training methods are needed to maintain employee interest. The program may include the following:

a) Safety Film

b) Talk on appropriate accident prevention subject. The speaker may be a member of the department, the Human Resource Director, or an outside expert.

c) Demonstration of artificial respiration, first aid, etc., with hands-on experience by employees.

SECTION 14
Hazardous Materials Safety Policy

Purpose

The purpose of this policy is to comply with the New Hampshire "Worker's Right to Know Law" (N.H. R.S.A. 277-A) which states that "employees who might be exposed to toxic substances during the course of their work should be informed of the nature and hazard of these substances."

The details of this hazardous materials safety policy will be available to all employees and **must be adhered to.**

Use of Hazardous Materials

1. **All** personnel using a hazardous material must be made aware of the potential hazards associated with it.

2. **All** containers of chemicals must be labeled. When using small quantities of a chemical, use all of the chemical or return it to the original container. **Never** leave any quantity of hazardous material in an unlabeled or improper container.

3. No food or drink shall be allowed in areas where potential toxic or harmful chemicals are stored, mixed or otherwise handled.

4. Caution should be used to avoid spills or splashes when handling chemicals. Spilled chemicals should be cleaned up and disposed of immediately. Do not walk into or touch spilled chemicals.

5. Wash hands frequently when handling hazardous materials.

6. Wear protective clothing, respiratory protection, rubber gloves, protective goggles, and face shield when required. The safe way to handle chemicals is to treat them like they are all dangerous.

7. Ensure adequate ventilation. Do not use chemicals which release toxic, noxious or harmful fumes in a confined space or an area which is not adequately ventilated.

8. Avoid inhalation of fumes, smoke and vapors even if no hazardous materials are known to be involved. Do not assume that gasses or vapors are harmless because of a lack of a smell. Odorless gasses and vapors may be harmful.

9. Precautions must be taken to prevent the ignition of flammable vapors. Sources of ignition include, but are not limited to: open flames, lighting, smoking, cutting, welding, heat-producing chemical reactions, radiant heat, and electrical devices. **Smoke only in designated areas!**

10. In the case of a chemical fire, use only the correct extinguishing agent. Be aware of noxious or toxic fumes. If the fire cannot be safely and quickly extinguished, notify the Fire Department and immediately leave the area.

11. If you are exposed to a chemical product, take immediate first aid precautions and seek medical attention. First aid protection instructions are provided on the Materials Safety Data Sheet (MSDS). Take the MSDS and/or product label with you when you go to the hospital.

12. If acid or caustic materials come in contact with the eyes or skin, flush immediately with large amounts of water. Get medical attention for any eye injury.

Material Safety Data Sheet (MSDS)

The buyer for each department will be responsible for obtaining the data sheet from suppliers. When toxic or hazardous materials are received without an MSDS, a letter will be sent to the supplier requesting the MSDS.

The Departmental Safety Committee will be responsible for maintaining the Material Safety Data Sheet system for their individual department. The Safety Committee will review incoming data sheets for new and significant health and safety information. The Committee will see that any new information is passed to any effected employees.

Copies of the MSDS's for all toxic and hazardous substances will be kept in the offices of each department, and be made available upon request to all employees.

MSDS's will be available in case of emergency for review during each work shift.

In order to comply with New Hampshire State Law, the Material Safety Data Sheet for each toxic substance to which employees may be exposed, must be posted as close to the work area as possible. The word "Warning" must be posted either on or beside the Material Safety Data Sheet to draw attention to it.

Employee Training and Information

The department head is responsible for all employee training. It will be the department head's responsibility to ensure that all elements of the training program are carried out.

Within the first month of employment, each employee who works with or may be exposed to hazardous substances in the course of their work will be provided with training on at least the following subjects:

1. Details relating to the hazardous materials safety policy.

2. Ways to detect the presence of hazardous materials.

3. Physical and health hazards associated with exposure to the substances they may encounter.

4. How to find, read and interpret material safety data sheets.

5. Ways to protect themselves against potential health and safety hazards.

6. What to do in case of emergency involving hazardous materials.

7. Chemicals present in the workplace.

Labeling

All containers with hazardous substances brought onto City property must be labeled as to their content and hazard. It will be the responsibility of each supervisor receiving or using the chemical to ensure that this section of the policy is adhered to.

When a hazardous substance is removed from its original container and placed in another container, the new container must be labeled with either an original manufacture's label or a generic label which has the pertinent information about the chemical.

The only exception to this rule is a chemical transferred to a portable container for use by only the employee who transferred the chemical and which is intended for immediate use of the employee during their work shift. If any of the chemical remains in the unlabeled container at the end of the shift, the container needs to be properly labeled or the chemical needs to be returned to the original container.

Contractors

It is the responsibility of the department head to ensure that all contractors are in compliance with the City of Portsmouth's hazardous material safety policy. This includes ascertaining that the contractor furnishes the City with material safety data sheets for all products which the contractor will be using while working on City projects where City employees may be exposed to the chemical. Likewise, the City will notify all contractors of any hazardous materials being used by the City in such a manner that the subcontractor's employees may be exposed.

Containers of all hazardous materials brought onto City of Portsmouth property by contractors must be labeled as to their content and hazard. It will be the responsibility of each supervisor working with a contractor to ensure that this section of the policy is adhered to.

Reading and Understanding the Material Safety Data Sheets (MSDS)

Hazardous materials come in three (3) basic types: raw goods, products and wastes. Training is the key to remaining safe while working with hazardous chemicals. Learn about the MSDS to protect yourself, and what to do in an emergency. The Material Safety Data Sheet is your best source of information on any chemical; understand it and know where to find it in an emergency.

Each section of the data sheet contains specific information about the chemical being used. A summary of each section is outlined below to help you understand where to find information you desire on the Material Safety Data Sheet.

Section 1 – Chemical Name

A chemical manufacturer's information is the identity as used on a label or list. It also gives the chemical manufacturer's name, address, and emergency telephone number.

Section 2 – Hazardous Ingredients

This section contains the hazardous ingredients contained in the chemical. This section lists the hazardous components by chemical identity or common name. It also gives OSHA's permissible exposure limits (PEL) for the chemical. The OSHA PEL limits are those limits that are an acceptable exposure for an eight hour day.

Another component of this section gives the American Conference of Government Industrial Hygienists threshold limit values. These values refer to the airborne concentration of the substance which workers can be exposed to on a daily basis without adverse effects.

Section 3 – Physical Data

This section lists the general characteristics of the chemical, such as boiling point, vapor pressure, vapor density, water solubility, specific gravity, evaporation rate, appearance and odor. This material allows you to understand how the material will react under different temperatures, how it will react if heated, mixed with water or confined in an unventilated area.

Section 4 – Fire and Explosion Hazards

Flash Point – This is the lowest temperature in which enough vapor mixture will burst into flames when exposed to an ignition source such as a spark or burning cigarette. A flash point near or below room temperature (77 degrees Fahrenheit) indicates that the material is especially dangerous because explosive vapors can form without additional heating.

Extinguishing Media – This section is important if the chemical should be involved in a fire, as it tells you what type of chemical must be used to extinguish it once it is burning. Special fire fighting procedures are important to note if you are involved in putting out a fire involving this particular chemical. Many chemicals give off lethal vapor that can kill a person after only a few inhalations. It is extremely important to know if the chemical you are dealing with requires self-contained breathing apparatus or other special fire fighting procedures during a fire.

Section 5 – Health Hazards

This section discusses possible routes of entry a substance may take into the body. It also discusses the acute (immediate) effects of overexposure to the chemical and the chronic (long-term) effects of exposure to the chemical.

Section 6 – Reactivity

This section describes how the chemical will react under particular circumstances. The stability section indicates whether the material is stable or not in its normal state and gives those conditions that should be avoided, such as ignition sources. The incapability section indicates which materials to avoid while using the chemical.

Section 7 – Clean up and Disposal

This section indicates methods for clean-up and disposal of hazardous materials, as well as precautions to be taken by those individuals performing this task. Information listed under waste disposal method specifies what to do with the material once it is cleaned up, and whether or not the material has to be disposed of in accordance with federal, state or local regulations.

Section 8 – Protective Measures

This section describes the equipment and ventilation procedures that should be used while working with the substance, such as personal protective equipment, respirators, eye protection, boots, clothes, and other protective equipment. If you do not understand the specific terminology in this or any other section, be certain to contact your supervisor before working with the chemical.

Section 9 – Special Precautions

Information not listed elsewhere on the material safety data sheet is described in this section. It may include information on the cleaning or disposal of contaminated clothing, handling procedures, storage information etc...

Being familiar with the Materials Safety Data Sheet and the information it contains is ESSENTIAL!! Take time to make sure you understand it and are using the safeguards listed on the sheet before an accident occurs.

SECTION 15
Lockout/Tagout Policy

General

A Lockout/Tagout policy is being implemented by the City of Portsmouth to prevent injuries caused by unexpected energization, start-up or release of stored energy during servicing and/or maintenance of machines, equipment, or vehicles in accordance with requirements established by the Occupational Safety and Health Act (OSHA) Standard 29 CFR 1910.147, The Control of Hazardous Energy (Lockout/Tagout). The purpose of this policy is to establish written working procedures in order to protect employees from injury that may be caused by the uncontrolled release of energy during servicing, maintenance or similar operations.

Definitions

Lockout/Tagout: The placement of a lock/tag on the energy isolating device in accordance with an established procedure indicating that the energy isolating device separates a machine or piece of equipment from an energy source.

Lockout Device: A device that utilizes a positive means such as a lock to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

Tagout Device: A prominent warning device, such as a tag, which can be securely fastened to an energy source in accordance with an established procedure, to indicate that the energy source and the equipment being controlled may not be operated until the tagout device has been removed. The tagout device shall be attached by a durable, non-reusable device (such as a wire tie).

Energy Isolating Device: A physical device that prevents the transmission or release of energy including, but not limited to the following: a manually operated electrical circuit breaker, a blind, a line valve, blocks, and similar devices with a visible indication of the position of the device.

Enforcement

The City Manager will be ultimately be responsible for the enforcement and implementation of this policy. Department Heads will be responsible to ensure proper training of all authorized and affected personnel, provide the proper equipment and, once the policy has been implemented, to enforce its adherence. He/she will use all means necessary to ensure compliance with this program including, but not limited to, incentives, disciplinary action, and/or termination of employment. The Human Resources Director will maintain administrative responsibility for this policy.

Standard Operating Procedure

Preparation

Upon determination of the need to conduct an operation that may present the opportunity for the uncontrolled release of energy, the Authorized Person shall contact the Department Head. The Authorized Person shall refer to the equipment specific Lockout/Tagout instructions to identify the type and magnitude of all sources of energy related to that particular piece of equipment, and will refer to the sequence of Lockout/Tagout in order to conduct the Lockout/Tagout operation.

Sequence of Lockout/Tagout Operation

Regardless of which piece of equipment or machinery is involved in the Lockout/Tagout operation, the following sequence of events shall be conducted in addition to those included in the equipment specific instructions.

1. Proper notification shall be given to all Affected Personnel working in the area. Messages, notes or other forms of written communication are **not** considered proper forms of notification. In order to ensure that a person has received pertinent information regarding a Lockout/Tagout operation, they should be informed verbally by the Authorized Person. Tags and written forms of communication may be used to supplement verbal information.

2. If the equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open toggle switch, etc.).

3. Refer to the individual machine Lockout/Tagout instructions which are attached to that particular machine to determine the energy control device(s) that need to be isolated. Conduct the steps outlined in the instructions for the proper isolation of all energy sources.

4. Dissipate or restrain all sources of stored energy (hydraulic systems, springs, air, gas or water pressure, rotating flywheels, etc.) by methods such as repositioning, blocking, bleeding down, etc... Precautionary measures must be taken to prevent re-accumulation of stored energy.

5. Lockout energy isolating devices with an approved and assigned individual lock(s). Specialized lockout devices may be needed for effective implementation.

6. Attach a Tagout device with the lock. Make sure that the date and the identity of the person who placed the lock is noted on the tag.

7. While using extreme caution to ensure that all personnel are safely positioned, test the equipment while attempting to operate the start-up device to make certain that the machine is disconnected from all energy sources. **IMPORTANT:** Return operating controls to the OFF position after this test.

8. After completing the sequences outlined here and in the particular machine instructions, proceed with caution to conduct necessary servicing, maintenance or other similar operations.

9. Following the servicing/maintenance operation, and before Lockout/ Tagout devices can be removed, certain steps must be taken to Re-Energize the equipment.

- Assure that the machinery and equipment components are operationally intact.

- Make certain that all tools and other unnecessary items are removed from the area.

- Notify Affected Persons that Lockout/Tagout devices are being removed, and ensure that all persons are safely positioned away from the equipment.

- Assure that the Lockout/Tagout devices are removed from each energy isolating source by the person who applied the device. Perform the starting procedure to restore energy to the machine or equipment.

- **NEVER REMOVE ANOTHER EMPLOYEE'S LOCK/TAG!!**

Procedure Involving More Than One Person

In the proceeding steps, if more than one individual is required to Lockout/Tagout equipment, each person shall place his/her own personal lockout device on the energy isolating device(s). When an energy isolating device cannot accept multiple locks or tags, a multiple Lockout/Tagout device (hasp) may be used. A single lock may be used to lockout the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use his/her own lock to secure the box or cabinet. As each person no longer needs to maintain his/her lockout protection, that person will remove his/her lock from the box or cabinet.

Basic Rules For Lockout/Tagout System Procedure

All equipment shall be locked out and tagged out to protect against accidental or inadvertent operation which could cause injury to personnel.

Do not attempt to operate any switch, valve, or other energy isolating device when it has been locked and tagged out.

Tags will never be used in place of, or without a lock on a piece of equipment that is capable of being locked out.

No person may remove another person's lockout or tagout device except under the following circumstances:

1. If an employee has left the facility without removing their lock, the Supervisor/Department Head must call or contact that employee and either has them return and remove their Lockout/Tagout device or receive their permission to remove the lock. If permission is granted by the employee, then the lockout device may be removed by the Supervisor/Department Head.

2. Any employee who decides by themselves that the lockout device of another employee shall be removed, and removes the device without following the previously stated procedures, may be subject to disciplinary action

3. If all attempts to locate the employee whose lockout device was left in place have failed (including a search of the work area and facility), the lock may be removed by the Supervisor/Department Head.

Lockout device removal shall not be performed until the knowledgeable parties have satisfied themselves that the work has been completed and the equipment is safe to operate.

Shift or Personnel Changes

In the event that personnel shall be replaced due to a change in work shift, the Department Supervisor shall ensure that there is an orderly continuity of Lockout/Tagout protection. When equipment is locked or tagged out and a shift change occurs, one of the following procedures must take place, depending on the appropriate situation:

1. The off-going employee informs the in-coming shift employee of the purpose of the lock or tag and an orderly transfer of the Lockout/Tagout device is performed in the presence of the on-coming employee. Prior to the transfer, the on-coming employee must ensure that the Lockout/Tagout procedure performed by the off-going employee was conducted in accordance with the most current SOP.

2. If the off-going employee requires the equipment to be locked or tagged out, and the on-coming employee is unavailable, the Shift Supervisor will place his/her Lockout/Tagout device on the equipment in the presence of the off-going employee. The Lockout/Tagout device is now in the control of the Shift Supervisor. If the Lockout/Tagout device needs to be removed r the control transferred, such removal or transfer will be performed by the Shift Supervisor, as required by this section.

Training

The City of Portsmouth shall ensure that the appropriate employees are trained on the purpose and function of the Lockout/Tagout program as required by 29 CFR 1910.14.

Each Authorized Employee will be trained in the Lockout/Tagout program. Authorized Personnel will be trained by a designated employee trainer. At a minimum the training will include:

- Recognition of applicable hazardous energy sources.

- The type and magnitude of the energy available in the workplace.

- Methods and means necessary for energy isolation and control, and,

- Proper lines of communication as to why, when, whom, etc.

Affected Personnel will be trained by the designated trainer. Each Affected Employee will be instructed in the purpose and use of the Lockout/Tagout program.

In cases where a lock cannot be used and a tagout system is used solely, employees shall be trained in the following limitations:

- Tags are simply warning devices attached to energy isolating devices and do not provide the same positive restraint as a lock.

- Tags are to be removed only by the Authorized Person who applied it, and must never be by-passed, ignored or otherwise defeated.

- Tags must be legible and understandable.

- Tags and their means of attachment must be made of materials able to withstand the environmental conditions of the workplace,

- Tags may evoke a false sense of security, and therefore, the meaning and limitations of tags must be understood.

- Tags must be securely attached to the energy isolating devices so that they are not inadvertently detached during use.

- Tags and locks shall be uniform at all times.

- New employees will be trained in Lockout/Tagout procedures and policies prior to entering an area where Lockout/Tagout is being implemented.

- Retraining shall be provided for all Authorized and Affected Personnel whenever there is a change that presents a new hazard or when there is a change in the Lockout/Tagout procedure. This retraining shall be provided annually or whenever a periodic inspection reveals that there is a deviation from the program, or inadequacies in the employee's use or knowledge of the procedures becomes evident.

- All employees trained in the Lockout/Tagout program shall have their names and dates of the training documented. This documentation shall include a brief description of the content of the training received and the name of the person(s) who performed the training. This information will be kept on file in the Human Resources Department.

Outside Contractors

Prior to any contractor beginning work for the City of Portsmouth, the City Engineer must be consulted as to the location and type of work being performed. Whenever outside servicing personnel are to be engaged in activities covered by the scope and applications of this standard, the outside employer (contractor) will follow the City of Portsmouth's Lockout/Tagout program unless doing so compromises the safety of the worker's performing the service. In such an instance, the outside employer's Lockout/Tagout program will be followed if it provides greater

protection for the employees. In addition, if either the City of Portsmouth's Lockout/Tagout procedures are changed or the contractor's Lockout/Tagout procedures are used, information concerning existing or potential hazards shall be exchanged before any work is performed.

The City of Portsmouth shall ensure that all personnel in affected areas understand and comply with the servicing contractor's Lockout/Tagout procedures if their procedures are used under the previously stated circumstances. The City of Portsmouth shall ensure that personnel understand and comply with restrictions and prohibitions of the contractor's procedures.

The City of Portsmouth will provide contractors with a copy of its Lockout/Tagout and Hazardous Communications programs.

SECTION 16
Confined Space Entry Program

Purpose:

The purpose of this program is to protect employees from the hazards of entry into permit and non-permit required confined spaces; identify and evaluate the hazards before entering them; and to develop and implement the means, procedures and practices necessary for safe entry operations.

Situation:

Public Works employees encounter the need to enter into confined spaces of various types in conjunction with their day – to – day work, as well as during alarm/abnormal conditions for the purpose of operating, maintaining, monitoring, servicing, repairing or inspecting. These spaces include but are not limited to: pump stations, water plant vaults, water towers, sewer manholes, wet wells, and chemical storage tanks.

It is the intent of this program to comply with the standards for confined space entry as outlined in the Federal Register, United States Department of Labor, Occupational Safety and Health Administration under Section 29, Code of Federal Regulations Part 1910:146, Permit-Required Confined Spaces for General Industry; Final Rule January 14, 1993.

Part One

Definitions

Acceptable Entry Conditions means the conditions that must exist in a permit space to allow entry and to ensure employees can safely enter into and work within the space.

Attendant means an individual stationed outside a space that monitors entrants and performs attendant duties.

Authorized Entrant means an employee who is authorized by the employer to enter a permitted space.

Confined Space means a space that: (need all three)

(1) Is large enough and so configured that an employee can bodily enter and perform assigned work and;
(2) Has limited or restricted means for entry or exit (for example : tanks, vessels, silos, storage bins, hoppers, vaults and pits are spaces that may have limited entry.) and
(3) Is not designed for continued employee occupancy.

Entry Permit (permit) means the written document that is provided by the employer to allow and control the entry into a permitted space.

Entry Supervisor means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space.

Hazardous Atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to self rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

(1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
(2) Airborne combustible dust at a concentration that meets or exceeds it's LFL; Note: This concentration may be approximated as a condition in which dust obscures vision at a distance of 5 feet or less.
(3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent.
(4) Atmospheric conditions of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances.
(5) Any other atmospheric condition that is immediately dangerous to life or health.

Hot Work means any work involving burning, welding, riveting, or similar fire producing operations which produces a source of ignition.

LEL Lower Explosive Limit, the minimum concentration of a combustible gas or vapor expressed as a percent of volume of air which will ignite if any ignition source is present.

Non-permit confined space means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics:

(1) Contains or has the potential to contain a hazardous atmosphere;
(2) Contains a material that has the potential for engulfing the entrant;
(3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or floors which slope downwards and tapers to a smaller cross-section; or
(4) Contains any other recognized serious safety or health hazard.

Permit required confined space program (permit space program) means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

Qualified Person a person designated by the employer, in writing, as capable of (by documented education of specialized training,) anticipating, recognizing, and evaluating employee exposure to hazardous substances or other unsafe conditions in a confined space. This person shall be capable of specifying necessary control and/or protective action to insure worker safety.

Part Two

General Requirements

Responsibility

It is the responsibility of the City of Portsmouth to evaluate the workplace to determine if any spaces are permit required confined spaces. .

For the purpose of this program the Foreman will define those areas under his/her jurisdiction deemed to be non-permit and permit confined spaces. Written determination and classification shall be forwarded to the Director of Public Works for approval. Final classification determination worksheets shall be included at the end of this section of the Safety Manual.

No employee shall enter a confined space until the entry permit is authorized by the responsible supervisor or designed team leader who is a "qualified" person and all preparations for entry are complete. An employee shall continue to work in the confined space only if all permit conditions continue in effect. Otherwise, the employee shall evacuate the confined space immediately and not return until permit conditions are re-established.

Any employee failing to follow Confined Space Entry Policy or failing to report the existence of unsafe conditions shall be subject to disciplinary action including suspension or termination.

Training Documentation

All personnel working in confined spaces should be properly trained in safe entry procedures. They should have thorough knowledge and understanding of their equipment and potential hazards that exist. Personnel should be physically and psychologically suited for the job.

Documentation of training should include at a minimum the following items:
(1) Subject(s) covered in the training session.
(2) Date of training.
(3) Trainers name and affiliation.
(4) Duration of training period.
(5) Brief narrative of training provided.
(6) Attendance.

Training documents shall be maintained as Part Six of this program with copies of documents filed in individual personnel folders.

Categories of Confined Space

A confined space is defined by OSHA in the Federal Register as a space that:

(1) Is large enough and so configured that an employee can bodily enter and perform assigned work and;
(2) Has limited or restricted means for entry or escape and;
(3) Is not designed for continued employee occupancy.

Under OSHA, a confined space has two categories, Permit required, and, Non-Permit Required.

A permit-required confined space means a confined space that has one or more of the following characteristics:

(1) Contains or has the potential to contain a hazardous atmosphere;
(2) Contains a material that has the potential for engulfing the entrant;
(3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or floors which slope downwards and taper to a smaller cross-section; or
(4) Contains any other recognized serious safety or health hazard.

A non-permit confined space means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazards capable of causing death or serious physical harm.

Guidelines issued by NIOSH (National Institute for Occupational Safety and Health), define confined space as, "a tank, vessel, silo, vault, open-topped space more than four (4) feet deep, pipeline, duct, sewer, or tunnel having limited means of egress and not designed for continuous employee occupancy," and having one or more of the following characteristics:

(1) Flammable/Combustible/Explosive atmospheres present or able to be generated or enter into the area.
(2) Toxic atmospheres present or able to be generated or enter into the area
(3) Areas not protected against entry of water, gas, sand, gravel, ore, coal, biological agents, radiation, corrosive chemicals, or any other substance which could possibly trap, suffocate or harm a person.
(4) Poor ventilation
(5) Restricted entry for rescue purposes.
(6) Oxygen levels at less than (<) 19.5%

The National Institute for Occupational Safety and Health classifies confined spaces into three categories by the potential severity that may be encountered:

Class A confined spaces present situations that are immediately dangerous to life or health (IDLH), including but not limited to oxygen deficiency, explosive or flammable atmospheres, and/or concentrations of toxic substances. Ranked as a **"High"** hazard environment.

Class B confined spaces have a potential to cause injury and illness if preventative measures are not utilized, but are not immediately dangerous to life and health. Ranked as a **"Moderate"** hazard.

Class C confined spaces do not require any special modification of work procedures due to potential hazards. Ranked as a **"Low"** hazard environment.

Confined Space Hazards

The hazards associated with a confined space can be divided into two categories, environmental hazards and physical hazards. Environmental hazards include: oxygen deficient and toxic atmospheres, breathing and eye irritants, and, fire and explosion hazards. Physical hazards result from slips and falls, moving equipment, electrical shock, high temperature, noise, and from improper selection and use of tools.

In guarding against both physical and environmental hazards in confined spaces, the primary prevention device is **awareness**. Proper training, the use of safety equipment, and attention to potential dangers will reduce employee carelessness which is the cause of most employee accidents.

Working in a Confined Space

DPW management shall not allow entry into a permit confined space without following the proper procedure which is outlined in this program. Entry into a non-permit required, or a Class B and C confined space for purposes other than routine monitoring, such as to perform maintenance, will require at least two persons, one of which is experienced and trained in entering the specific confined space.

Sole entry into a non-permit required , or a Class B and C confined space to perform monitoring is permitted to do so provided that the individual is experienced and trained in confined space entry practices as described in this program.

"Permit-Required" or "Class A" Confined Space Entry Procedure

No person shall enter a Permit Required or a Class A confined space without a written permit completed and signed by DPW management. Table 1 at the end of this section lists those areas currently determined to require a written permit.

For entry into a permit required confined space, a minimum of two people are necessary outside, in order for one person to enter. The authorized entrant, the entry supervisor, and the entry attendant shall all be trained in confined entry procedures as outlined in this program.

No person(s) shall enter a Permit required or a Class A confined space without first determining if atmospheric permits safe entry. At a minimum, testing shall be made for oxygen content, combustibility, and known toxic gases. Upon entry, continual monitoring shall be provided to determine if any atmospheric changes occur during the entry. Should monitoring indicate a condition change from acceptable to unacceptable atmosphere, the entrants shall immediately evacuate the confined space.

All personnel entering a Permit required or a Class A confined space shall wear a safety harness and be fastened to a retrieval device. Outside attendants sole responsibility will be to

monitor the health and safety of the entrant. They shall be fully prepared to retrieve the entrant or summon help in the event of an emergency. Neither the entry supervisor nor the entry attendant shall perform any other task(s) during the period that any person is inside a Permit required or a Class A confined space.

Personal protective equipment will be dictated by the space being entered as well as any material or conditions within the confined space. Personal protective equipment, (i.e., gloves, safety glasses, face masks, hard hats, flash lights, earplugs, etc.,) shall be considered disposable items and be made readily available to confined space entry personnel.

Safe adequate lighting should be provided. Only explosion proof flash lights should be used when entering a Permit required or Class A confined space where the potential for explosion exists. External lighting should be kept at a distance to eliminate a possible ignition source.

Communication between the personnel inside the confined space and those outside should be maintained on a continuous basis. Direct voice and observation is the preferred method. However, other means such as radio, air horn, rope pulls, and hand signals may be utilized as well.

Ventilation, either natural or mechanical shall be provided within the confined space on a continual basis. Ventilation shall begin at least 15 minutes before the first entry is made into the space and run without interruption until the entry permit is terminated.

Any means of lifting or lowering equipment shall be independent of personnel retrieval systems. At no time is the entrant authorized to remove the retrieval cable/rope to which they are attached. Suitable ladders shall be provided in order for entry/exit of the confined space. A ladder to facilitate evacuation shall remain connected to any confined space entry way at all times.

When working on any electrical component, that component should be locked out and tagged to prevent any accidental motor engagement or electrical shock. A good practice and prudent precautionary measure, is to lock out all unnecessary electrical equipment that may create a hazard when working in a confined space.

This philosophy of isolating potential hazards is also applicable to pipes and valves. Whenever practical, any open channel or piped flows into a confined space should be eliminated entirely or limited through valves, by-passing, plugging or pumping. In all cases, **confined space entrants need to be aware that hazards may arise from sources other than those associated with the immediate task being performed.**

Table One

Worksite Locations Requiring a Written Permit

1. All sewer manholes greater than five feet deep as measured from the shelf to the rim.
2. All sewer and water pump station wet wells
3. All water towers and chemical storage tanks
4. Storm water Collection Systems
5. For areas not listed here, see Foreman before entry is made.

Non-Permit Required, or Class B and C Confined Space Entry Procedure

Although the previous section is primarily concerned with a Permit required or Class A confined space, the information is valid for use in any confined space environment. Workers and management should encourage the adoption of the safest working practices regardless of the specific confined space hazard potential.

For Non-Permit Required or Class B and C confined spaces, entry can be made without the need for a permit or atmospheric testing provided that the individuals are aware that the area is considered a confined space. This can be accomplished by posting the entry with a warning sign that confined space conditions exist. Locations currently covered by this section are listed in Table 2.

Entry into a Non-permit required or Class B and C location should only be made by those individuals who meet the following minimum standards:

For un-escorted individual entry: (monitoring)

(1) Have been trained in confined space entry procedures and the conditions of this program.
(2) Have been documented in their personnel folder as having been trained in confined space entry.
(3) Are experienced, knowledgeable, and familiar with the operation and hazards within the confined space.
(4) Have available some means of communication to summon help in the event of an emergency, or, have made it known to DPW management, City safety personnel, or other DPW staff their intent to enter a confined space.
(5) Un-escorted entry is permitted only for monitoring purposes of less than thirty (30) minutes duration.

For escorted extended period entry: (maintenance)

(1) At least one of the entrants shall meet the above minimum requirements.
(2) No person shall be left alone within a confined space during maintenance operations.
(3) Direct communication with DPW management, City safety personnel, or other DPW staff must be established before entering. Periodic two-way checks by radio, telephone, or by observation should be made at thirty minute intervals. If no check is received or returned, DPW management, City safety personnel or other DPW staff will proceed to the confined space and investigate.
(4) Upon completion of the confined space entry, the entrants shall make it known to DPW management, City safety personnel or other DPW staff that the entry is concluded.

Table Two

Locations of Non-Permit Required or Class B & C Confined Spaces

1. Bar rack decks for Main Sewer Pump Stations
2. Dry Well areas for Sewer Pump Stations
3. Pump Room of Pumping Station
4. Pipe Gallery for City Well
5. Static Mixer Vault at Water Plant
6. For areas not listed here, see foreman for determination before entry is made.

Rescue Procedures in Confined Spaces

If an employee observes that a co-worker in a confined space is injured, non-responsive, or otherwise in danger, the following procedures shall be followed by the stand-by person:

(1) The stand-by person shall not enter the confined space.
(2) The stand-by person shall assess the situation and, if immediately possible remove or secure the victim from further danger without entering the confined space.

Example: secure rope line from harness to keep victim's upper body out of the water, etc.

(3) The stand-by person shall notify the supervisor from the field by radio of the nature and location of the emergency and request that Emergency Services (911) be contacted.

(4) If the victim can be removed and stand-by person is trained in First-Aid procedures, standard First-Aid procedures should be followed.

(5) Stand-by persons at departmental facilities with immediate access to telephones shall call 911 directly. The following information shall be furnished to the department office personnel and the 911 dispatcher:

a. Identification of caller
b. Nature of emergency (i.e., "worker non-responsive in man-hole")
c. Number of victims
d. Exact location, whether in the field or within a City facility
e. Available information relating to the extent of injuries (i.e., broken bones, etc.)
f. Available information as to atmospheric hazards (i.e., oxygen deficiency)

(6) The stand-by person or office personnel shall notify the Department Head who will further assess the situation and provide further immediate instructions to the office personnel relative to summoning additional assistance, etc... If the Department Head is not immediately available by phone or radio, office personnel shall contact the Foreman of the employee(s) involved, or the senior supervisor/foreman in the Division. The Safety & Training Officer shall be notified after notification of all Department management.

(7) Rescue efforts at the scene shall be coordinated by the highest ranking department employee present until the arrival of the Portsmouth Fire Department. The Fire Department officer responding shall be briefed by the employee present, and will assume charge of coordinating all rescue efforts.

Training Program for Confined Space Entry Policy

(1) All Public Works personnel shall be trained upon implementation of the confined space entry policy.

(2) New employees shall be trained within thirty (30) days of hiring and shall not be assigned to any confined space entry jobs until such training is completed.

(3) Refresher training shall be held as necessary, at least annually, to keep personnel up-to-date on confined space hazards and entry procedures.

(4) Training shall be documented as to date, content, and trainee/trainer signatures.

(5) Training shall include (within thirty (30) days of hiring):

a. Definition of a confined space and identification of specific confined spaces within the department.
b. A description of the potential hazards and classification system of confined spaces including the department posting procedures.
c. Review of the entire confined space entry policy with special attention to entry, permit, and rescue procedures.
d. Proper use of personal protective equipment, and other safety and monitoring equipment.

Overview

This Confined Space Entry Policy is designed to provide employees of the City of Portsmouth's Department of Public Works with an understanding of safety and health hazards associated with working in confined spaces and to furnish written procedures that must be followed to eliminate or reduce these hazards to acceptable levels. These guidelines will be the basis of all in-house training programs for all employees at all levels in both performing and supervising work in confined spaces throughout the City. These confined space entry procedures, based primarily on the issuance of a complete and comprehensive entry permit, has been designed so as to minimally interfere with the timely completion of most daily work objectives and to fix accountability for worker safety awareness and degree of training at each employee level in the Department.

Confined Spaces can be hazardous, and they can be hazardous in a variety of ways. Oftentimes the confined space will not appear to be hazardous; it may have been entered on previous occasions without incident, and may give no signs of apparent danger. At other times there may be ready indications of danger: the distinct odor of irritating or toxic atmospheres, the presence of arching electrical equipment, continued mild shocks or flowing grain or sand. By their nature, confined spaces concentrate hazards, in that certain gases will displace breathable air, or that the confined space will allow the accumulation of toxic hazards or flammable or explosive atmospheres; and physical hazards, in that confined spaces limit the ability to avoid contact with electricity, moving mechanical components or unstable substances. Recognition of the inherent capacity of these spaces to harbor hazardous agents is a significant element in any workplace hazard assessment. When confined spaces are recognized to be hazardous, provisions for minimizing the need for entry and for use of appropriate work practices and equipment can be made.

City of Portsmouth
Department of Public Works
Water/Sewer Confined Space Determination Worksheet

Location:

Secondary Location:

Is this area a Confined Space:

OSHA Confined Space Classification:

NIOSH Confined Space Classification:

Potential Physical Hazards:

1. Slippery Floor:
2. Electrical Shock:
3. Noise:
4. Darkness:
5. Burns:
6. Falls from Height:
7. Falling Objects:
8. Moving Machinery:
9. Dust/Vapors:
10. Breathing Impairment:
11. High/Low Temperature:
12. Sewer/Water Exposure

Potential Environmental Hazards:

1. Oxygen Deficient Atmosphere:
2. Toxic Atmosphere:
3. Explosion and Fire Hazard:
4. Engulfment of Drowning:
5. Other:

Recommended Personal Protection Equipment

1. Retrieval System:
2. Safety Glasses:
3. Gloves:
4. Face/Dusk Mask:

5. Hardhat:
6. Boots:
7. Safety Vest:
8. Flashlight:

Determination Survey Made By: **Date:**

Survey Reviewed and Approved By: **Date:**

Survey Renewal Dated:

City of Portsmouth
Department of Public Works
Confined Space Classification Overview

Classification:	Class A	Class B	Class C
Hazard Ranking:	High	Moderate	Low
Characteristics:	Dangerous/Life/Health	Dangerous	Potential Hazard
Personnel Requirement	3 Person Minimum, 1 Person must remain outside confined space. Emergency Rescue Personnel present	2 Person Minimum, 1 outside confined space.	2 Person Minimum, 1 outside of confined space.
	Communication Determined by Rescue Personnel	Indirect Visual or Auditory Communication	Communication determined by Qualified person.
Safety Precautions:	Harness Ventilate	Harness Ventilate	Ventilation determined by Qualified Person.
Atmospheric Monitoring: **Oxygen Level:**	< 16%	16.1 – 19.4 %	19.5 – 21.4 %
Flammability **Methane:**	> 20% LEL	10 – 19 % LEL	< 10 % LEL
Toxicity **Hydrogen Sulfide:**	> 50 ppm	10 – 50 ppm	< 10 ppm
Frequency of Atmospheric Monitoring:	Continuous	Continuous	Determined by Qualified Personnel

Type of Work Conditions Present	Hot Work Painting Electrical Plumbing	Excessive Flow Structural Instability Heat / Noise	Open-topped Tanks

SECTION 17

SLIP, TRIP, AND FALL PREVENTION PROGRAM

Falls are the second leading cause of accidental death, nationally, and a major cause of debilitating injuries. In food service operations falls are the primary source of injuries. This program is designed to protect employees and visitors from slip-fall injuries.

A. SCOPE

This program applies to all employees, contractors, vendors, and visitors. The principal cause of falls are stepping on slippery surfaces, stepping onto material and debris, elevation changes on walkways, poor lighting, and carrying excessively large or heavy loads. Essentially the momentum of motion pushes the person off balance and a fall results.

B. REFERENCES

American National Standard, (ANSI) A 1264.1-1995 for stairs and steps design, and A1264.2 for slip-resistance measurement.

American Society for Testing and Materials (ASTM) D2047-93 F1240-89, and F802-83 for the recommended slip resistance of flooring.

Americans with Disabilities Act (ADA) recommendations for floor friction coefficients.

OSHA 29CFR1910.21, 22, and 23 sets the national standard for walking-working surfaces in the industrial environment.

C. DEFINITIONS

Coefficient of friction – This is the measure of how slippery a floor is under dry conditions. Stated formally, it is the magnitude of the horizontal force required to start an object slipping divided by the weight of the object. The generally accepted value is greater than 0.5 for most general use floors.

Friction – The resistance between shoes and the walking surface. The loss of traction, or increase in friction can result in a fall.

Handrail – Horizontal, sloping, or vertical member normally grasped by hand for support. It may be part of the railing system. Every set of steps having three treads and four or more risers shall be equipped with stair railing. Stairways which are less than 44 inches wide shall have at least one handrail, preferably on the right side descending. Stairways in excess of 88 inches wide shall have one handrail on each side, and an intermediate stair rail midway in the width of the stairway.

Hazardous location – These include any opening in the walking surface, open sided floors, and any location where a predictable walking routine may be interrupted. Principal hazards include uneven walking surfaces, holes, stairways, and wet areas.

Level or elevation changes – Unexpected changes in the walkway or sidewalks which create hazards for walkers.

Pit, trap door, and manhole floor openings – Every opening shall be guarded by a load-bearing cover. When the cover is not in place, the opening shall be protected by a removable railing system.

Proper ladder use – Ladders are required to be maintained in good condition and appropriate for the job at hand. Makeshift ladders, stacks of materials, and ladders which are not sited for the job at hand should not be used.

Ramps – Should not be steeper than 30 degrees from the horizontal, and if steeper than 20 degrees, the ramp should be equipped with handrails.

Slip-fall – The loss of balance caused by insufficient friction between the feet and the walking surface.

Slip resistance – All treads and nosings shall be of slip resistant material. Employees are encouraged to wear shoes with slip resistant soles.

Slope – Fixed stairs and steps shall be installed at angles to the horizontal of 30 to 50 degrees, with the preferred slope being 30 to 35 degrees. Heavier use areas should have lower slopes to reduce the chance for stumbling.

Stair design – Standardization of steps and ramps is needed to prevent accidents. Pedestrians need to have stairs and steps which are predictable in construction to avoid falling. Walkways which change in slope and have unmarked single steps should be avoided. Risers and treads should be uniform and have uniform dimensions to avoid tripping.

Trip-Fall – A loss of balance caused by poor lighting, walking on loose surfaces, and uneven footing.

Uniformity of risers and treads - Riser height and tread depth shall be uniform throughout any flight of stairs or steps. Stairs should also be constructed to be comparatively uniform at UNM buildings. Sidewalks should be free of unexpected level changes, holes, slopes, obstructions, and single steps.

D. RESPONSIBILITIES

JLMC– will monitor slip-fall accident occurrences and determine physical areas which need improvement or modifications. LGC will inspect buildings for hazards and inform Human Resources Director and the Physical Plant Department of hazards which are identified. Floor surfaces will be checked, as requested, for friction to assure the surface is not slippery.

Public Work Department – Custodians must place barricades when the floor they are working on is wet. "Wet Floor" signs are preferred, and the entire work area should be visible from either end. These signs must be taken down when the work is complete, so pedestrians will understand that the signs notify them of actual hazards. Non-skid mats should be placed at entrances during inclement weather.

Supervisors – Supervisors and managers should assure that this policy is followed, and that employees are also instructed in this policy and in the tenets of the General Housekeeping Program. Employees must take the initiative to clean spills promptly, to avoid carrying heavy loads, and to be diligent in keeping debris from the walk areas. The supervisor can notify HR for assistance in dealing with unsafe conditions.

Employees – Employees have a general obligation to clean up spills, pick up debris, and take precautions that other persons are not injured on city property. Employees are expected to use ladders properly. Employees also must report hazards to supervisors or managers for repairs.

E. PRACTICES

Slip-fall accidents include falls incurred in buildings, and on the grounds, but are usually falls on the same floor level or simple falls to the ground, floor, and stairs.

1. Housekeeping procedures prevent the majority of slip-fall accidents.

    - "Ice walking" is the practice of taking short steps when walking on slippery surfaces to keep the center of balance under the body and on the feet.
    - Close file drawers when leaving the area. Open cabinets account for many falls in the office environment.
    - Clean up spills immediately. Most persons do not expect spills, and as such, spills become hazardous.
    - Electric cords should not be placed in walking areas. If necessary, purchase a rubber step-over strip to cover the cords. Persons can fall when their feet become entangled in the cords.
    - Mats should be placed at the doors during rain and inclement weather so that moisture is not spread in the hallways.
    - Mats and non-slip coatings are recommended for food service preparation areas.
    - Aisles should be marked in warehouse and storage areas and should be maintained free and clear of material.

2. Proper shoes help to prevent accidents. An efficient way of increasing the coefficient of friction is to wear shoes appropriate for the conditions.

    - Shoes having neoprene soles are used on most surfaces, but are not recommended for oily conditions.
    - Crepe soles are recommended for wet or dry rough concrete, but are not suggested for tile, smooth concrete or wood surfaces.

- Leather soles can become slippery if wet, and are not recommended for dry smooth concrete or tile.
- Soft rubber soles are preferred for dry surfaces, but are not suggested for wet surfaces or greasy concrete.
- Hard rubber soles are best for greasy concrete and wood. They are not recommended for ceramic tile, dry or wet concrete and dry wood.

City of Portsmouth

Employee Safety Manual