CITY OF KENNETT

LOSS PREVENTION MANUAL

LOSS PREVENTION POLICY

It is the intent of the City of Kennett to implement a comprehensive loss prevention program. The City's employees are its most important asset and their safety is our greatest responsibility. The health and safety of all is our utmost consideration. Employees at all levels are directed to make safety a matter of continuing concern. This program emphasizes that effective loss prevention is a key part of management responsibilities and can only be effective by fully utilizing the City's available resources and enlisting the support of all personnel.

Operational activities must be reviewed to minimize exposure to personal injury and property damage. Planned operations should be reviewed to include consideration of errors which may occur. Accidents are unplanned events. Proper planning and supervision can minimize the likelihood of accidents. Accidents are preventable. The key to loss prevention is to initiate the necessary pre-planning to minimize unsafe acts, contain risks, and control unsafe conditions.

Through emphasis on loss prevention techniques, refinement of work policies and procedures, and creating a safe working environment, we will reduce injuries to our employees and prevent damage to property. All employees are responsible for compliance with the City's Loss Prevention Program as outlined in the attached manual. Employees are expected, as a condition of their employment, to adopt the concept that the safe way to complete a task is the most efficient and the only acceptable way. Safety will be included as part of the performance evaluation of each and every City employee.

The successful implementation of this program rests with each one of us. Let's rise to the occasion and make our Loss Prevention Program a complete success. Let's make it part of our daily lives as employees of the City. I look forward to working with you in this very important effort.

Chancellor Wayne D.C.
Mayor
03/18/2020

TABLE OF CONTENTS

MANAGEMENT PARTICIPATION

IMPLEMENTATION OF PROGRAM

An effective safety program can only be achieved by management's commitment to its success. Individual responsibilities are outlined in Section Two. Each department needs to set forth its objectives in striving to reduce our losses due to preventable accidents. The extent of the frequency or severity of personal injury or property damage can be reduced through proper preventative measures. Effective accident prevention measures are those which have been formulated at each Administrational level throughout the organization and thoroughly discussed with our employees. Through utilization of a safety committee we will have candid exchanges of ideas between supervisory personnel and employees, this will enhance identification of problem areas, and development of approaches to deal with those problems.

SAFETY COMMITTEE

The Safety Committee will serve as an advisory body to the Mayor. It will be responsible for recommending policies and procedures affecting the administration of the loss prevention program. Membership will be comprised of the following:

1. Mayor
2. Fire Department Supervisor
3. Police Department Supervisor
4. Park Department Supervisor
5. Street Department Supervisor
6. Human Department Supervisor
7. Safety Officer

Members appointed by Department Directors may be supervisory personnel.

The Safety Committee shall meet monthly, attendance is mandatory. Activities of the Committee shall include, but not be limited to the following:

1. Meeting minutes will be taken by a secretary chosen by the Committee. Minutes will be distributed to the Mayor, each Department Director, and to Departmental Supervisors. Minute files will be maintained in the City Clerk's Office.

2. The Committee shall recommend policies and procedures affecting the development and administration of an aggressive accident prevention program.

3. The Committee shall recommend program goals and objectives to ensure the success of this program

4. Establish a safety guideline handbook including general rules and regulations.

5. Review data, records, and reports of safety matters. This will include review of claims filed during the preceding month and making recommendations as to how the accident could have been avoided.

6. Perform follow-up investigation of accidents and make safety inspections when appropriate. The committee will file a report to the Mayor and the Safety Officer making recommendations as to accident prevention.

7. Develop a continuing program of safety and health.

8. Prepare an annual report to the City Council concerning the programs significant activities/accomplishments.

9. Review safety suggestions presented by employees.

10. Formulate recommendations for safety material, policy and procedure changes, and equipment needs that can enhance the loss prevention program.

11. The Committee will make decisions with respect to the Safety Incentive Program.

LOSS PREVENTION RESPONSIBILITIES

Each employee is responsible for implementing the provisions of this program. The responsibilities below listed are minimum and shall in no way be construed to limit individual initiative to implement more comprehensive procedures to reduce losses.

MAYOR

The City Administrator has overall responsibility for the Loss Prevention Program and its administration. Specific responsibilities include:

1. Establishing the City's Loss Prevention Program.

2. Developing in each Department Director a strong commitment to the safety program and its success.

3. Attend Safety Committee Meetings on a regular basis.

4. Review serious accidents to ensure that their causes are being investigated and that improper corrective action is taken to prevent a reoccurrence.

5. Review the necessary Loss Prevention Program to appraise its effectiveness.

SAFETY OFFICER

The Safety Officer is responsible for directing this program. Duties include:

1. Serve as Chairman of the Safety Committee. Present recommendations where necessary to the Mayor. Appoint inspection panels for quarterly facilities inspections.

2. Administer the City's Loss Prevention Program.

3. Consult directly with management personnel and employees on loss prevention matters.

4. Perform investigations to ensure that unsafe conditions or practices are identified and corrected.

5. Keep the Mayor and Department Directors informed about the status of matters affecting the loss prevention program.

6. Inspect facilitates for hazardous conditions, practices, and overall program compliance.

7. Maintain an effective safety awareness program for City employees.

8. Coordinate compliance with federal, state, and local safety laws.

DEPARTMENT HEADS

Each Department Director is responsible for maintaining a safe and healthful working environment. The Director is responsible for providing the work environment, work procedures, and service to the highest extent possible for the safety of City employees, and the general public. Each department director will:

1. Develop and support a safety program that will reduce and control accidents.

2. Appoint a Departmental representative to the Safety Committee.

3. Develop safety rules and regulations pertinent to governing the conduct of departmental activities and programs.

4. Establish and maintain a system of safety analysis and perform regular inspections.

5. Provide training and continuing safety instruction to all Departmental employees. Hold each supervisor accountable for explanation of preventable injuries, collisions, and liability incurred by departmental employees.

6. Take corrective action on unsafe conditions.

SUPERVISORY PERSONNEL

Supervisory personnel have responsibility for employee safety. This includes personnel, equipment, work area, and methods. Supervisors are responsible for the following:

1. Enforcing safety procedures that apply to their work.

2. Providing adequate training to employees under their direction.

3. Accountable for preventable injuries, collisions, and liabilities caused by his/her employees.

4. To enforce management policies.

5. Provide safety instruction to focus attention upon potential hazards, changes in work conditions or procedures.

6. Ensure that all employees are instructed in the use and need for protective equipment.

7. Continually evaluate work conditions and procedures to correct unsafe conditions and practices.

8. Investigate accidents and make certain that corrective actions are taken.

9. Ensure that safety equipment and protective devises are available for each job, are used, and properly maintained.

10. Report accidents/injuries to the Safety Officer as soon as practicable after the accident.

EMPLOYEES

Employees are required, as a condition of employment, to work safely to prevent injuries to themselves, their fellow workers, and to the public. Each employee will:

1. Promptly report to their supervisor unsafe actions, practices or conditions.

2. Cooperate with and assist in the investigation of accidents, to identify correctable causes, and to prevent their reoccurrence.

3. Promptly report to their supervisor all accidents and injuries.

4. Always observe proper safety practices.

5. Maintain clean, orderly work areas and equipment.

6. Not engage in horseplay.

7. Observe safety rules and adhere to published work instructions.

8. Wear protective equipment when working in hazardous operation areas.

9. Arrive at work suitably attired for their job.

EMPLOYEE VIOLATION OF SAFETY REQUIREMENTS

A. Any employee found to be in violation of this section or other sections of this manual shall be subject to dismissal in accordance with the City Personnel Manual.

   All employees may be dismissed at any time for any of the causes listed in the City Personnel Manual. The employee will be advised in writing of the reasons for the dismissal no later than two days before the effective date. A copy of the dismissal notice will be placed in the employee's personnel file.

SAFETY INCENTIVE PROGRAM

I. PURPOSE:

The purpose of this program is to promote safety awareness.

II. RULES/DEFINITIONS:

An employee is required to report all injuries to his/her supervisor, no matter how slight.

The Safety Committee will be responsible to review all accidents/incidents. A preventable accident is one in which the employee failed to do everything he or she could have reasonably been expected to do to prevent it. The Safety Committee will make classification of accidents or injuries as "preventable" or "non-preventable".

The failure to report an accident, injury, property damage, or violation of a Safe Work procedure may result in disciplinary action. Failure to provide enough information on the appropriate report may result in the Safety Committee ruling that the accident was "preventable".

III. PROGRAM:

As a result of the outstanding year in reducing the number and cost of "loss claims" and the efforts of the Loss Control Program, starting January 2020 the City of Kennett will implement a new safety incentive program. Each employee who works accident free from January to December will receive a $50.00 safety award. The award will be presented to the employee from the Supervisor prior to December 15th.

LOSS PREVENTION METHODS

Each of the following loss prevention methods are an important part of the overall program.

INSPECTIONS

Inspections shall be conducted at least quarterly, by a three-member panel from the Safety Committee and the Department Director. The panel will be appointed at each quarterly meeting of the Safety Committee by the Risk Management Coordinator. The panel will issue a written report on their findings and recommendations at the next Safety Committee Meeting.

Informal inspections should be made regularly by each Department Director, this is to ensure that hazards are kept at a minimum and that safe work practices are enforced. Emphasis should be placed on the condition of facilities, equipment, and machinery as well as implementation of the overall program such as:

1. Good housekeeping.

2. Utilization of prescribed protective equipment.

3. Compliance with Departmental work rules.

4. Vehicle/equipment condition.

5. Proper storage of flammable liquids and maintenance of fire fighting equipment.

6. Proper guarding of open pits, ditches, tanks, etc.

7. Proper maintenance of equipment and tools.

8. Compliance with the safety program.

JOB SAFETY ANALYSIS FOR HAZARDOUS WORK

To eliminate accidents in high hazard areas, each supervisor must make workers aware of the hazards that exist and ensure an understanding of the method of performing each job safely. It is essential that published work rules be used to identify hazards. The procedures for developing these published work rules through job safety analysis (JSA) are as follows:

1. The job is broken down into steps.

2. Each step is analyzed for hazards that could cause an accident. The purpose is to identify the inherent hazards so that each step of the job can be performed safely.

3. When the hazards and potential accidents associated with each step are identified and their causes understood, ways of eliminating them can be developed.

4. Using the information gathered from the first three steps. Work rules are implemented which address the specific problems/hazards. This becomes an aid to assist the supervisor in instructing employees in the safest method of performing their jobs.

JOB SAFETY TRAINING

Supervisors are responsible for training newly hired, newly assigned, or reassigned employees in job safety procedures. Employees must be properly trained. The supervisor should:

1. Preparation

   A. Put the employee at ease.

   B. Define the job.

   C. Create employee interest.

   D. Instruct the employee in the correct performance of the job.

2. Presentation

   A. Illustrate one important step at a time.

   B. Stress key points.

   C. Communicate clearly, completely, and patiently.

3. Performance

   A. Instruct while the job is being completed by the employee.

   B. Have the employee explain key points as the job is repeated.

   C. Make sure the employee understands.

   D. Work with the employee until you are satisfied that he/she can complete the tasks safely.

4. Follow-Up

   A. Assign the employee to the task.

   B. Designate to whom the employee goes for help.

   C. Check frequently; encourage questions.

   D. Taper off extra coaching and close follow-up.

ACCIDENT INVESTIGATION

Investigation of any accident is the key in controlling losses. Thorough investigation, recording, and corrective follow-up of each accident is necessary if anything is to be learned from the experience.

1. Injuries must be investigated by the supervisor of the injured person as soon as possible after it has occurred. The investigation shall be in report form as seen in the exhibits. The following procedures must be followed as closely as possible:

   A. Check the scene and reconstruct as much as possible without repeating the accident.

   B. Collect evidence. If any injury or near miss occurs, it is essential to determine what happened and why.

   C. It is important to interview witnesses at the scene as soon as possible thereafter.

   D. If the injury is minor, interview the victim. The interview should be made as soon as practical. If the injury is serious, select the right time.

   E. Weigh the evidence and determine remedies to eliminate reoccurrence.

SAFETY DISCIPLINE

When violations of policies occur, corrective action must be immediate and positive. Disciplinary action will be considered when any person causes an injury or destroys or damages equipment either by willfully violating safe work rules or by disregarding regulations or by demonstration of an attitude of indifference or defiance. Department Directors will have latitude in determining the extent of disciplinary action to be taken.

The correction of improper performance requires more attention than the correction of mechanical and machine hazards.

The correction of improper or unsafe actions requires instruction, a demonstration of how to do the job, and follow-up to see that the instructions are followed.

TEMPORARY TRANSITIONAL DUTY

Introduction

Temporary Transitional Duty Programs have proven to be cost-effective and to contribute to the timely recovery of an employee who has been injured but still possesses the ability to work in a limited capacity. Because the City wishes to remain at the forefront of occupational health and safety, it has adopted a Temporary Transitional Duty Program for its employees.

Purpose

This policy establishes the authority for temporary transitional duty assignments and procedures for granting temporary transitional duty to eligible employees.

Policy

Frequently employees who, because of injury, illness or disability, are temporarily unable to perform their regular assignments can perform alternative assignments. Temporary transitional duty can provide employees with an opportunity to remain productive and return to work before they have reached maximum medical improvement. It also provides a work option for employees who may otherwise risk their health and safety or the safety of others by remaining on duty when physically or mentally unfit for their regular assignment. Therefore, it is the policy of the City of Kennett that eligible personnel are given a reasonable opportunity to work in temporary transitional duty assignments if available.

Definitions

Eligible Personnel: For purposes of this policy, any employee suffering from medically certified illness, injury or disability requiring treatment of a licensed health-care provider and who, because of injury, illness or disability, is temporarily unable to perform the regular assignment but is capable of performing temporary alternative assignments.

Maximum Medical Improvement: The point when recovering from injury, illness, or disability, at which an employee has reached maximum medical improvement.

Procedures

A. General Provisions

1. Temporary transitional duty positions are limited in number and variety.

a. personnel injured or otherwise disabled in the course and scope of employment shall be given preference in initial assignment to transitional duty; and
b. assignments may be changed at any time if deemed in the best interest of the City while keeping within the medical restrictions; and
c. eligibility to participate in the program will cease when the employee has reached maximum medical improvement.

2. The Family and Medical Leave Act, Fair Labor Standards Act, Americans with Disabilities Act, or other Federal and State law remain applicable to employees accepting transitional duty assignments.

3. No specific positions within the City shall be established for use as a temporary transitional duty assignment, nor shall any existing positions be designated or utilized exclusively for personnel on temporary transitional duty.

4. Transitional duty assignments are strictly temporary and typically do not exceed 90 days in duration. After 90 days, personnel on temporary transitional duty who are not capable of returning to their original duty assignment shall:

   a. present a request for an extension of temporary transitional duty (not to exceed an additional 90 days), with supporting documentation, to the City Clerk, or
   b. pursue other options as provided by employment provision of this City or Federal or State law.

5. All City personnel on temporary transitional duty are prohibited from engaging in outside employment, in which they may reasonably be expected to perform functions for which they have been determined physically or mentally unable to perform on behalf of this City and that forms the basis for their temporary transitional duty assignment.

6. Transitional duty assignments shall not be established for disciplinary purposes.

7. Employees may not refuse temporary transitional duty assignments that are supported by and consistent with the recommendations of a City selected physician. The City may interpret failure to accept and perform transitional duty work as a resignation.

8. When an employee has reached maximum medical improvement as determined by a City selected physician, and assessment by the Safety Officer will be made regarding the employee's ability to perform regular job duties of a different job with or without a reasonable accommodation.

B. Temporary Transitional Duty Assignments

1. Temporary transitional duty assignments may be drawn from a range of areas that include but are not limited to the following:

    a. administrative projects (e.g. report review, special projects)
    b. clerical functions (e.g. filing)
    c. desk assignments (e.g. booking officer, bookkeeping)
    d. communications (e.g. complaint taker)
    e. inspections (e.g. sidewalks, street signs, buildings, equipment)
    f. updating (e.g. MSDS at various locations)
    g. painting (e.g. fire hydrants, park benches & equipment)
    h. community relations (e.g. police community awareness visits)

2. Department Heads shall notify the Safety Officer or designee of any work that may be used for temporary transitional duty.

3. In addition to consideration included in A-1 of this policy, decisions on temporary transitional duty assignments shall be made based upon the availability of an appropriate assignment given the applicant's knowledge, skills and abilities; availability of transitional duty assignments; and the physical limitations imposed on the employee by the City selected physician.

4. Every effort shall be made to assign employees to positions consistent with their position and pay classification. However, where appropriate, personnel may be assigned to positions within other departments and positions designated for personnel of lower position or pay classification. Employees thus assigned shall:

    a. retain the privileges of their rank but shall answer to the supervisor of the department to which they are assigned regarding work responsibilities and performance; and
    b. retain the pay grade and related benefits of the position held prior to their assignment to temporary transitional duty as controlled by the employment provisions of the City of Kennett.
    c. for work related accidents, if the employee is not retained at the same the pay grade of the position held prior to their assignment to transitional duty, workers' compensation temporary partial disability benefits may be available.

C. For work related accidents in which the employee is not immediately released to return to normal duty the following shall apply:

1. Immediately following treatment, the employee should report to his/her supervisor their condition and return to work status.

2. At the earliest possible opportunity, the Safety Officer or City Clerk will discuss the case with the physician concerning the course and scope of the treatment and the ability of the employee to perform transitional duty. The Safety Officer will then discuss with the supervisor, the employee's transitional duty assignment.

3. Within the first three days following an accident the supervisor shall contact the employee and inquire as to the employee's ability to return to work.

4. If the employee has not returned to work after three days, then the Safety Officer or City Clerk shall call the doctor and the employee to check the employee's transitional duty status.

5. If the employee is not able to return to work after three days then the employee shall call the Safety Officer or City Clerk to discuss the employee's transitional duty status and present the work status report provided by the treating physician, immediately following each doctor's appointment.

6. If it is determined that the employee may be medically able to perform transitional duty, the essential functions of the transitional duty shall be identified by the supervisor and reviewed with the employee.

D. Request for and Assignment to Temporary Transitional Duty for non-work conditions

1. Requests for temporary transitional duty assignments are usually completed by the employee. However, the supervisor may complete the request as described in (D-3). Requests must be accompanied by a statement of medical certification to support the requested reassignment, which must be signed by the treating physician. The certificate must include an assessment of the nature and probable duration of the disability, prognosis for recovery, nature of work restriction and an acknowledgement by the health-care provider of familiarity with the transitional duty assignment and the fact that the employee can physically perform the duties involved.

2. The request for temporary transitional duty and the physician's statement shall be forwarded to the City, who shall make a recommendation regarding the assignment to the Safety Officer or the City Clerk.

    a. This City may require the employee to submit to an independent medical examination by a physician of the City's choosing, other that the City's Workers' Compensation physician. In the event the opinion of the City selected physician differs from that of the foregoing health provider, the employee may request a third opinion at the employer's expense.

b. The employee and representatives of the City shall cooperate and act in good faith in selecting any third health-care provider, and both parties shall be bound by that medical decision.

3. An employee who has not requested temporary transitional duty may be recommended for such assignment by submission of a request from the employee's immediate supervisor. Such a request must be accompanied by an evaluation of the employee conducted by a competent medical authority expressing the need for temporary transitional duty or by a request/order for a medical of psychological fitness-for-duty examination.

   a. Notice shall be provided to the employee of the proposed temporary transitional duty assignment together with justification for the recommendation.

OCCUPATIONAL ILLNESS AND INJURY CONTROL

In addition to methods cited previously, there are several steps which can be taken to reduce the possibility of occupational illness and injuries.

PHYSICAL FITNESS

The fitness of each employee is the key in preventing personal injuries. Employees are encouraged to maintain good health and exercise habits.

FIRST-AID TREATMENT FOR SICK OR INJURED EMPLOYEES

1. Injuries, regardless of how minor, must be reported to the supervisor and call First Nurse. If the supervisor is not available, the injured employee should contact First Nurse and follow their instruction and then report the injury to their supervisor. The supervisor must see that the injured employee seeks first aid or medical treatment.

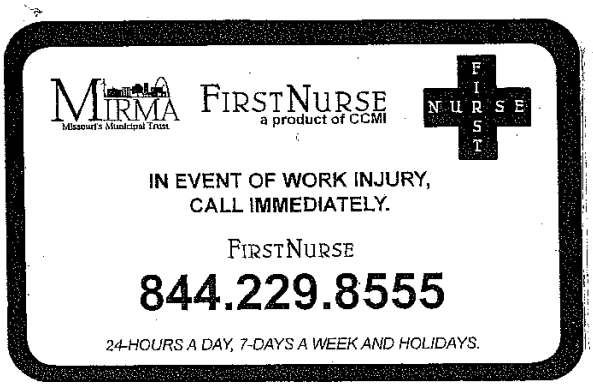
2. The family of an employee who is seriously ill or injured must be promptly notified by the supervisor or his/her representative.

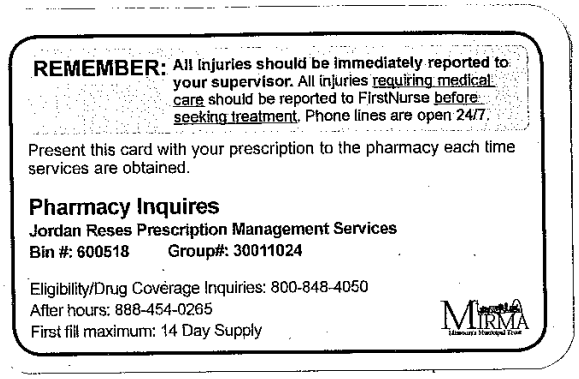
3. The Department Director, Safety Officer, and City Clerk shall be notified by the supervisor or his/her representative.

<u>First Nurse Telephonic Case Management Program</u>

Program facilitates immediate telephonic nurse contact on a 24/7 basis for injured employees while providing immediate accident reporting to the Member representative and MIRMA as soon as accidents are reported. Telephonic nurse contact will assess and advise employee of the most prudent course of medical treatment. Nurse will triage patient care to ensure appropriate and timely medical care while minimizing any lost time of regular work hours. Telephonic nurse follows up with injured employee and authorized medical provider to assess appropriateness of care while coordinating information to MIRMA. Nurse will document contact in TPA claim system and complete the majority of the First Report of Injury.

It is not necessary to contact FirstNurse in the event of a catastrophic injury where immediate medical intervention is necessary.





EMERGENCY MEDICAL TREATMENT

In the event that a serious injury occurs which requires medical treatment, administer first-aid as necessary and call an ambulance. In the event of an emergency medical situation, treatment should be obtained at the closest appropriate facility or as determined by First Nurse.

INTERACTION OF MEDICINE

An employee taking medication which causes dizziness, blackouts, drowsiness, double visions, impaired judgement, or other similar reactions shall not be allowed to work until treatment is completed, and the effects have dissipated.

INTOXICATION OF EMPLOYEES

An employee reporting to work who is obviously under the influence of alcohol or drugs shall be suspended immediately pending a thorough investigation. Upon evaluation of the facts and confirmation of a violation of work rules, the employee will be dealt with in accordance with the City's personnel regulations.

PERSONAL PROTECTIVE EQUIPMENT

I. Policy Statement

A. The City of Kennett considers the safety and health of its employees to be of the utmost importance.

B. All employees working on or visiting areas where hazardous activities are occurring (i.e., construction, operations, and maintenance) will be provided with and required to wear or use personal protective equipment as directed by this policy.

II. Purpose

A. To require the use of personal protective equipment where there is reasonable probability an injury or illness can be prevented by such equipment. All employees working in or entering a hazardous environment will wear the required personal protective equipment. Failure to comply with all aspects of this policy is grounds for disciplinary action. This policy applies to operations, processes or work which involve(s) a hazardous environment.

III. Definitions

A. Anchorage – A secure point of attachment for lifelines, lanyards or deceleration devices, and which is independent of the means of supporting or suspending the employee.

B. ANSI - American National Standards Institute

C. Body harness – A design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

D. Buckle – Any device for holding the body belt or body harness closed around the employee's body.

E. Competent person – A person who can identify hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use with related equipment.

F. Connector – a device which is used to couple (connect) parts of the system together. It may be an independent component of the system (such as a carabineer), or an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

G. DBA - A unit for expressing the relative intensity of sound.

H. Dielectric Strength - a nonconductor of direct electric current.

I. Eye and Face Protection - protective devices intended to shield the wearer's eyes and face from a variety of hazards, shall meet the requirements and specifications established in the American National Standard Institute's

Practice for Occupational and Educational Eye and Face Protection Z 87.1 - 2003.

J. Face shield - A protective device commonly intended to shield the wearer's face, or portions thereof, in addition to the eyes, from certain hazards.

K. Goggle - A protective device intended to fit the face immediately surrounding the eyes in order to shield the eyes from a variety of hazards.

L. Hand and Body Protection - Protective gloves or clothing worn by an individual to reduce the risk of contamination or electric shock.

M. Hard Hats – hard hats for protecting heads from impact and penetration, from falling and flying objects, shall meet the requirements and specifications established in the American National Standard Institute's Safety Requirements for Industrial Head Protection, Z89.1 - 2003.

N. Hearing Protection - A protection device designed to reduce the effects of noise exposure.

O. Lanyard – A flexible line of rope, wire rope or strap which is used to secure the body belt or body harness to deceleration device, lifeline or anchorage.

P. PPE - Personal Protective Equipment

Q. Personal fall arrest system – A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

Q. Protective Footwear - A protective shoe or boot worn by an individual to reduce the risk of impact, contamination or electric shock. Footwear shall meet the requirements and specifications established in the American National Standard Institute's guidelines (ANSI Z41 - 1991).

R. Respiratory Protection - A protective device that is issued to reduce individual exposure to occupational disease caused by breathing air contaminates (e.g. harmful dusts, fogs, fumes, mists, gases, smokes, particles, sprays, and vapors). Respirators shall meet the requirements and specifications established in the American National Standard Institute's guidelines (29 CFR 1910.134).

S. Safety Restraint Device - A safety device (seat belts, shoulder harnesses, etc.) used to restrain an individual in a moving vehicle to reduce the severity of injury.

T. Safety Vests/Shirts - A vest or shirt worn by an individual working in areas where it is determined necessary that they be clearly visible.

U. Spectacle - A protective device to shield the wearer's eyes from a variety of hazards, depending on spectacle type.

V. Tie-off – The act of an employee wearing personal fall protection equipment connecting directly or indirectly to an anchorage. It also means the condition of an employee being connected to an anchorage.

IV. <u>Responsibilities</u>

A. Department/Division heads and supervisors are responsible for administration of this policy as it pertains to employees and work areas under their jurisdiction. Employees are responsible for observing safe operating procedures pertinent to their duties and for being familiar and complying with this policy.

B. Department/Division heads shall identify the work areas and hazardous environments and formulate written policies for same.

V. Hard Hats

A. Hard hats shall be worn by all employees who are required to work, including but not limited to, any of the following circumstances or conditions:

1. Within a posted hard hat area.

2. On any job where an employee may be struck by falling or flying objects or menaced by bumps, such as, but no limited to:

a) Traffic sign maintenance and installations.
b) Street lighting maintenance and installation.
c) Heavy equipment activities.
d) Shovel gang operations.
e) All demolition activities.
f) All construction and excavation activities including road work.
g) Tree trimming or removal activities.
h) Below lift or scaffold activities.
i) Storage, stockpile, or inventory storage activities where posted.
j) Where the danger from electrical hazards exist

B. Hard hats must, at a minimum, meet current OSHA Class G level, which protects against impact hazards and provides limited voltage protection (up to 2,200 volts).

C. Bump style caps are not allowed.

D. Hard hats are to be inspected, maintained, and worn in accordance with the manufacture's recommendations.

E. Hard hats that sustain a heavy impact are to be taken out of service.

VI. Eye and Face Protection

A. Proper eye protection may include, but not limited, the following: safety glasses, with or without safety side shields, splash goggles, face shields, welding helmet, and welding goggles

B. Appropriate eye and face protection shall be worn by all employees who are required to work, including but not limited to, any of the following circumstances or conditions:

1. All operations where hardened metal tools are struck together.
2. Where equipment or material is struck by a hand tool.
3. Where the cutting action of a tool causes particles to fly.
4. By other employees who may be exposed to flying particles.
5. Mowing operation and chain saw use.
6. Where woodworking or cutting tools are used head-high or overhead with the chance of particles falling or flying into the eyes.
7. When cutting wire and cable, striking wrenches, using hand drills, chipping concrete, removing nails from scrap lumber, shoveling material head high, or using wrenches or hammers overhead, and on other jobs where particles of debris or materials may fall.
8. Where exposed to splashes or corrosive chemicals or fine dust or mist.
9. Where the face is exposed to radiant heat.
10. For operations such as oxyacetylene welding, cutting, lead burning, and brazing.
11. For any operation involving sawing or buffing metal, sanding, grinding, handling chemicals, or other hazards.
12. Operation of powered landscape maintenance equipment (e.g., weedeater, trimmers, chippers, blowers, mowers, edgers, chain saws).
13. All types of pneumatic tools (e.g., pressurized mechanical power washers).

C. Selection - refer to selection chart and protective devices.

D. Safety glasses are not required in transit between jobs.

VI. <u>Hearing Protection</u>

A. All City employees will be provided with and required to wear an approved hearing protection device when exposed to noise which exceeds those levels and exposure limits as established by the Occupational Safety & Health Administration. Such protective devices shall have an Environmental

Protection Agency Noise Reduction Rating (NRR) to provide adequate protection. The following listing is representative (not all inclusive) of the activities possibly requiring the use of hearing protectors:

1. Operations using landscape maintenance equipment
2. Operations at utility facilities
3. Operations in construction areas
4. Operations of heavy equipment
5. Operations in machine shops
6. Operations involving equipment used in street repair

B. Supervisors are responsible for the distribution of hearing protectors and will share the responsibility for proper use.

C. Hearing protective equipment (of a non-disposable nature) will be replaced only upon receipt of the original equipment, showing why it is no longer useful, or upon reasonable explanation as to why the equipment is missing or was destroyed beyond recovery. Should the equipment be damaged or lost through misuse or carelessness, the responsible employee may be charged the replacement cost of the equipment.

D. The following table summarizes current permissible noise exposure limits:

Duration per day, hours	Sound Level DBA
8	90
6	92
3	97
2	97
1 1/2	100
1	105
1/2	110
1/4 or less	115

E. The use of headset radios and music players by employees will not satisfactorily diminish ambient noise and may themselves create hazards and are, therefore, prohibited.

VII. Safety Vests/Shirt

A. To comply with the ANSI Class 2 Minimum Standards, employees working on, or near, a roadway shall be provided with apparel designed to warn motorists of their presence (orange safety vest or shirts).

1. Additional equipment such as orange gloves, cap, etc. may be provided if deemed appropriate.
2. The roadway is defined as the area between the curb and where curbs would be if said area does not have curbs.
    a. Employees working in any other area where it is determined necessary that they be clearly visible shall also be provided with safety apparel.
    b. Employees upon being provided with appropriate safety apparel shall wear same when working in any of the areas outlined above.
    c. Each supervisor is responsible for the distribution and proper use of this equipment.
    d. Each employee provided with safety apparel is responsible for its maintenance and proper use when in their care.
    e. If this equipment is damaged or lost through misuse or carelessness, the responsible employee may be charged the replacement cost.

VIII. Hand - Body Protection

A. Employees working in areas or operations where the following personal protective equipment is required shall wear the equipment if the hazard is or may be present.

1. Work clothing - Appropriate clothing is provided or required when working for the City. The clothing shall not interfere with the performance of an employee or expose him/her to unnecessary hazards. Long sleeve shirts may be required on certain operations.
2. Special clothing - Special clothing may be required to protect an employee from impacts and dust, fire and heat, vapors, moisture and corrosive liquids, as well as, temperature changes.
3. Gloves - Appropriate gloves are provided and their use required when an employee is working in an area where he/she is exposed to injury to the hands or fingers from material, machinery, heat, chemicals, electrical, contact, sharp objects, etc.
4. Each department or division is responsible for identifying those areas, operations, in which such equipment is necessary, including the type of equipment required.

IX. Protective Footwear

A. To establish minimum foot protection requirements for those employees involved in job activities where such protection is normally required.

1. Shoes such as sneakers, sandals, canvas tops, are not acceptable in the work environment and are prohibited.
2. Leather work shoes or boots with durable soles must be worn by all field personnel.
    a. This includes but is not limited to such occupations as street repair, park maintenance, firefighters, police officers, mechanics, utility service workers, maintenance personnel, building inspectors, etc.
    b. Employees involved in working with or near electric utility lines or equipment shall have the appropriately designated footwear.
3. Each supervisor is responsible to ensure that proper footwear is being utilized by employees.

X. Respiratory Protection

A. Respirators that are applicable and suitable for the purpose intended will be supplied to all employees when such equipment is necessary for their protection.

1. Respirators will be selected based on hazards to which the worker is exposed. All existing inhalation hazards at various locations will be identified and personnel will be trained in the proper use of the equipment assigned to those hazards to which they are exposed.
    a. Proper selection of respirators shall be made according to the guidance of 29 CFR 1910.134.

2. Training will include the following:

    a. Identification of the proper devices for the hazard involved.
    b. Determining the proper fit.
    c. Cleaning and care of the respirator(s).
    d. Identifying worn and deteriorating parts, and replacement of same.

3. A respirator should be assigned to individual employees for their exclusive use, in order to prevent the spread of any communicable diseases.

4. Respirators will be cleaned and disinfected after use each day.

5. Clean respirators should be stored in a convenient sanitary place. Most respirators will be purchased with a re-usable plastic bag for this purpose.

6. Regularly inspect respirators for defects and deterioration of parts each time it is cleaned. If a defect is found, contact your supervisor (a substitute will be issued until yours can be repaired or replaced).

7. Inspections will be made of all respiring devices to check for proper use, cleanliness, and proper maintenance. Inspection reports will be kept on file in the respective department.

8. An initial physical will be performed to determine if an employee is able to perform his duties while using a respirator. A periodic physical examination will be performed to determine if any inhalation problems have occurred during their use.

XI. Vehicle Safety Restraint Devices

A. All City vehicles and equipment designed to require or permit the installation of safety restraints (seat belts, shoulder harnesses, etc.) shall be so equipped.

B. All drivers and occupants of City vehicles equipped with safety restraint devices are required to utilize them.

C. All drivers of City vehicles equipped with safety restraint devices must require all passengers to utilize said equipment prior to the operation of the vehicle.

D. The drivers of City vehicles shall not remove, defeat or deactivate any safety restraint device, and shall advise Vehicle Maintenance whenever said device is not functioning properly.

E. The following may be considered exceptions of the above policies.

    1. When it becomes necessary due to an emergency to carry more passengers than the vehicle has safety restraints.

    2. Specific operations may be excluded from these regulations with written approval from the Department Director and City Manager.

    3. Riding on non-passenger areas is prohibited.

HAZARDOUS MATERIALS

Hazard Communication Program

The intent of the Hazard Communication Program is to ensure appropriate communication is provided to the employees concerning the hazards of all chemicals stored or used by the city. This transmittal of information will be accomplished by container labeling and other forms of warning, material safety data sheets (MSDS), and employee training. Supervisors are responsible for ensuring proper labeling, the maintenance of the MSDSs, and for providing their employees information and/or training on hazardous chemicals in their work area.

A. All hazardous materials stored or used within all departments will be properly labeled as follows:

   1. Identity of the hazardous chemical(s) and appropriate hazard warnings; or, alternatively, words, pictures, symbols, or a combination thereof, which provides at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

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

   3. Portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer, do not have to be labeled.

B. A Material Safety Data Sheet (MSDS) will be maintained in the workplace for each hazardous chemical used. Each sheet will be reviewed to ensure the following information is provided:

   1. Identifiers - Tells the source of the MSDS and the name of the chemical or product (by formula, chemical family, and trade name or synonym).

   2. Permissible Exposure Limits (PEL's) - Indicates the average amount of a chemical you can safely be exposed to, usually over an 8-hour shift.

   3. Physical Data - Information about the chemical's appearance, smell, and physical properties (boiling point, vapor density, volatility, etc.).

   4. Hazardous Ingredients - Gives the names of hazardous ingredients in mixtures such as paints, alloys, and fluxes.

   5. Fire and Explosion Data - Tells a chemical's potential to catch fire or explode.

6. Health Hazard Data - Lists the PEL, tells the signs and symptoms of overexposure, and gives emergency first-aid procedures.

7. Reactivity Data - Tells how stable a chemical is and what materials it should not come into contact with.

8. Spill or Leak Procedures - Gives steps to take if a chemical leaks or spills.

9. Special Protection - Provides the protective equipment you must use in order to avoid exposure, and details on required ventilation.

10. Special Precautions - Tells how to handle and store the chemical safely, and other precautions necessary.

C. All affected employees will receive information and/or training on hazardous chemicals in their work area. This information and/or training will be provided upon the employee's initial assignment. Whenever a new physical or health hazard material is introduced into a work area the employee shall be informed about the hazard prior to its use. Information and training may be designed to cover categories of hazards (e.g. flammability, carcinogenic) or specific chemicals.

1. Information provided must include:

   a. The requirements of this section.

   b. Any operations in their work area where hazardous chemicals are present.

   c. The location and availability of this written procedure, the list(s) of hazardous chemicals, and the MSDS's.

2. Training will include at least:
   a. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area, such as monitoring conducted by the foreman, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.

   b. The physical and health hazards of the chemicals in the work area.

   c. The measures employees can take to protect themselves from these hazards, including specific procedures implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

   d. The details of the hazard communication program, including an explanation of the labeling system and the MSDS, and how employees can obtain and use the appropriate hazard information.

Gas	Chemical Formula	Common Properties	Physiological Effects	Highest Concentration
Ammonia	NH_3	Colorless, sharp pungent	Irritates eyes and respiratory tract. Toxic at 0.01%	At top.
Carbon Dioxide	CO_2	Colorless, odorless	Cannot be endured at 10% for more than a few minutes even if subject is at rest and oxygen content normal.	At bottom. When heated may stratify at point above bottom.
Carbon Monoxide	CO	Colorless, odorless, tasteless, flammable, poisonous	Unconsciousness in 30 minutes. At 0.2 to 0.25%. Fatal in 4 hours at 0.1%, headache in few hours at 0.02%.	Near top, especially if present with illuminating gas.
Chlorine	Cl_2	Yellow green color. Chocking odor detectable in very low concentrations. Nonflammable.	Irritates respiratory tract. Kills most animals in a very short period of time at 0.1%.	At bottom.
Hydrogen	H_2	Colorless, odorless, tasteless. Flammable.	Acts mechanically to deprive tissues of oxygen. Does not support life.	At top.
Hydrogen Sulfide	H_2S	Rotten egg odor in small concentrations. Exposure for 2 to 15 minutes at 0.01% impairs sense of smell. Odor not evident at high concentrations. Colorless. Flammable.	Impairs sense of smell rapidly as concentration increases. Death in minutes at 0.2%. Exposure to 0.07 to 0.1% rapidly causes acute poisoning.	Near bottom but may be above bottom if air is heated and highly humid.
Methane	CH_4	Colorless, odorless, tasteless. Flammable.	Does not support life.	At top, increasing to certain depth.
Oxygen (in air)	O_2	Colorless, odorless, tasteless. Supports combustion.	Normal air contains. 20.8%. Humans can tolerate down to 12%. Minimum safe 8-hour exposure, 14 – 16%. Below 10% is dangerous to life. Below 5 – 7% probably fatal.	Variable at different levels.

Handling and Storage

A. Chemical handling - For the safe handling of any chemical follow the manufacturers recommendation found on their Material Safety Data Sheets and the chemical hazard chart.

B. Chemical handling normally requires the use of safety goggles, gloves, boots, and coveralls.

C. Learn the proper method of using the emergency eyewash and showers.

D. Learn the safety precautions to observe with all chemicals in your work area.

E. Clean up all spills of chemicals immediately (especially mercury).

F. Use proper lifting methods when handling heavy containers or bags of chemicals.

G. Employees who handle or use chemicals, compressed gases, poisons, corrosives, flammable liquids, or other harmful substances shall have training in methods of safe handling, use, and control. They will be instructed in potential hazards, personal hygiene, and protective measures required.

H. Use only approved containers to store and handle liquid chemicals or flammable and combustible liquids. All containers must be clearly marked to identify their contents.

I. Chemicals, compressed gases, flammable liquids and combustible liquids must be stored only in approved, designated areas.

J. When working alone (or an entire crew is in same hazardous area) be sure that someone else knows of your schedule. Set up a reporting time - at least once each hour.

K. All departments in which employees use or could be exposed to hazardous chemicals will be required by law to comply with the program designed to bring public and private sectors into compliance with the "Hazardous Chemical Right to Know Law". This law requires training and familiarization with all hazardous materials, explanation of the pertinent MSDS, record of personnel trained and conspicuous posting of warning information.

Common Gases

CHEMICAL HAZARDS				
Name	**Chemical Formula**	**Hazard**	**Protection**	**First Aid**
Alum	$Al_2(So_4)_3$	Toxic Irritant	Respirator, Gloves, Eye Protection	Water / Soap

Ammonia	NH_3	Fire Toxic	Respirator, Eye Protection	Water / Soap
Carbon	C	Fire Irritant	Respirator	Water / Soap
Chlorine	Cl_2	Toxic	Supplied Air Breather, Gloves, Eye Protection, Protective Apron	Water / Soap
Ferric Chloride	$FeCl_3$	Irritant, Caustic	Respirator, Gloves, Eye Protection, Protective Apron	Water / Soap
Lime-Hydr. Lime	$CA(OH)_2$	Irritant, Caustic	Respirator, Gloves, Eye Protection, Protective Apron	Water / Soap
Quick Lime	CaO	Irritant, Caustic	Respirator, Gloves, Eye Protection, Protective Apron	Water / Soap
Polymers		Irritant	Respirator, Gloves, Eye Protection	Water / Soap
Lab Chemicals		Varies	See MSDS	See MSDS

Chlorine

A. Do not handle chlorine cylinders roughly; never drop cylinders or permit one to collide with another. It is advisable to move cylinders (up to 150 lbs.) by means of hand trucks equipped with safety chains. Specially designed electric hoists fitted with the proper lifting bar should be used for 1-ton containers. When unloading cylinders from a truck to ground level, it is best to use a hydraulic lift gate or suitable skid with a rubber bumper at the bottom.

B. Avoid hoisting containers: if such action is necessary, work with safe lifting clamps or cradles; avoid use of ropes, cables, and chain slings. To move cylinders from storage to the place of consumption carry them with a properly balanced hand truck, preferably with a clamp support or safety chain at least two thirds of the way up the cylinder to hold it in place.

C. Store cylinders weighing up to 150 lbs. in an upright position where heavy materials cannot fall on or against them. See that the cylinders are supported so that they cannot fall over. Select storage places where containers will be shielded from mechanical disturbances, especially by moving objects. Do not store containers below ground level or in the chlorine-feeding room. Store 1-ton cylinders on their sides on a level rack or platform with adequate safety blocks to prevent rolling.

D. Always keep the protective caps in place when the cylinders or containers are not in use and are being handled, because the discharge valves and fusible plugs are not designed to take shocks. As soon as a cylinder or container is empty and disconnected, replace the protective caps. Always tag or mark empty cylinders or containers at once. It is advisable to store full and empty containers or cylinders in different sections of the storage area to avoid confusion in handling.

E. Store chlorine containers and cylinders in a cool place and protect them from exposure to external heat sources. Never permit the temperature of the contents to approach 140o F. Keep containers and cylinders that are stored

out of doors away from direct exposure to the sun and the weather; maintain them in a clean condition and inspect them regularly for leakage.

F. Do not store containers or cylinders near flammable materials, or where continuous exposure to dampness will result.

G. Make certain that the storage area is well ventilated, and that containers or cylinders are so arranged that a leaking unit could be removed with the least possible handling of other containers. Arrange to use a fireproof storage room equipped with an exhaust ventilating system.

H. Place containers and cylinders in the order in which they are received so that the oldest can be used first.

Controlling Chlorine Leaks

A. The slightest odor of chlorine may indicate a leak and should receive immediate attention because small leaks can grow rapidly.

B. Two men should be assigned to the repair of a chlorine leak, one acting as a safety observer.

C. Connections to the cylinder valve should be made carefully. When threaded connections are used, it should be ascertained that the threads on appliances and unions are the same as those on the container valve outlets. If connections that do not fit are forced together, they invariably leak.

D. Unless the apparatus is designed to handle liquid chlorine, the valve of the 1-ton container should be in the proper position to withdraw gas. The two identical valves on the 1-ton container are connected to adductor pipes inside the container. When it is lying on its side and the valves are in a vertical line (one above the other), the lower valve will discharge liquid chlorine and the upper valve will discharge chlorine gas from above the liquid level. Most plants using 1-ton containers have the cradles holding the containers on scales or in scale tanks 1-2 in. higher at the valve end elevating that portion so that gas instead of liquid will be drawn when chlorine is taken from a full container.

E. Containers or valves should never be altered or repaired by the consumer, except for stopping gas leaks around valve stems by tightening the packing nut. The safety devices on containers should never be tampered with. The valve cannot control the fusible plug on cylinders below the valve seat. The 1-ton container is equipped with six (three on each end) fusible metal plugs designed to soften or melt at 158-165o F, thus allowing the contents of the container to discharge.

F. Container valves should be opened slowly. No wrench longer than 6" should be used as the employment of large wrenches or pipe wrenches will damage the valves. On complete turn of the valve stem in a counterclockwise direction will open the valve sufficiently to permit maximum discharge.

G. To test for chlorine leaks, a small cloth or swab should be attached to one end of a stick, and the material should be soaked with ammonia water (10% NH3) and applied to the suspected area. (Some operators prefer to use a small bottle fitted with an aspirator.) A white cloud of ammonium chloride will result if there is any leakage.

H. All employees handling and using chlorine should be supplied with an approved chlorine gas masks, and they should be instructed in its use. A program of a least monthly chlorine gas drills should be conducted to familiarize personnel in working with the masks on and in use of chlorine leak safety devices. Gas masks, thick loose-fitting gloves, and aprons of nonporous material should be kept in lockers outside of the chlorine equipment area where they can be reached quickly in an emergency.

I. All installations using chlorine should have on hand a chlorine-leak repair kit consisting of suitable clamps, drift pins, hammers, wrenches, and other tools for emergency service on cylinders where leaks cannot be otherwise stopped. Drift pins should be of brass or steel and of suitable size to fit the usual fusible plug and valve openings in cylinders and containers. Because drift pins are not suitable for packing holes in the cylinder walls, wooden plugs and clamps should be employed.

J. Installations using liquid chlorine should carefully evaluate the need for providing tanks in which the container may be flooded with a solution of caustic soda or alkali to a depth and volume enough to absorb completely the contents of the container or cylinder. The caustic soda or alkali tank should be located immediately adjacent to the area of storage or use. Such receptacles should be equipped with suitable anchor clamps to keep the chlorine cylinder or container from floating when it is nearly empty. The degree of hazard is determined by the location of the chlorine plant and should be a deciding factor in determining the need for absorbing tanks. Where the treatment plant is isolated from built-up areas, the need for tanks is not so demanding as where the chlorine feed equipment and containers are in an urban locality.

K. When a chlorine leak occurs, the chlorine room ventilating system should be turned on immediately.

L. Only authorized and trained personnel equipped with gas masks should investigate chlorine leaks. All other persons should be kept away from the affected area. If the leak occurs on the outside of the building, everyone should stay to the windward side of the leak and, if possible, at a higher elevation. When a leak occurs in equipment in which chlorine is being used, the chlorine container valves should be closed first.

M. If a leaking chlorine container is in such a position that liquid chlorine is escaping, the container should be turned or raised so that only gaseous chlorine is discharged.

N. Water should never be applied to a chlorine leak because this creates a hazardous condition with the leak being made worse by the corrosive action of chlorine and water.

O. The use of a 2" water ejector connected to a high-pressure water supply system and equipped with at least a 50' 2" rubber garden hose that has an enlarged rubber funnel on the end for sucking most of the chlorine gas away from the leak should prove very helpful. The discharge from the ejector can be in the raw water channel or to a point where the chlorine water will not cause harmful conditions.

P. If dry ice is available and it can be packed around a leaking container, the rate of evaporation will be greatly retarded. If the leak cannot be stopped, the entire cylinder should be dumped in the alkaline-absorbing tank.

Q. Because it is unlawful to return a leaking cylinder, its contents should be removed before shipping. The supplier of the cylinder should be immediately notified that it is defective, and he should be asked to dispose of it.

R. Heat should never be applied directly to a container as this could rupture it by internal pressures. If it is necessary to heat a container, a water bath controlled not to exceed 80o F should be used. Grease of oil should never be used on fittings that will be in contact with chlorine. Certain types of silicone greases may be used sparingly on valve stems and hard-rubber fittings.

S. Before disconnecting the flexible leads from containers to gas headers, the cylinder valve should be closed first and then the gas under pressure should be drawn from the header and flexible leads before the header valve is closed. The exhaust system should be turned on and operated while the cylinders are being disconnected and repairs are being made on chlorine lines and equipment.

T. The plastic protective cover for the rotameter tube should be in place before chlorine equipment provided with rotameters is operated.

U. If fire breaks out, every effort should be made to protect the chlorine cylinders or containers or to remove them from the danger area. Firemen should be informed of their location and poisonous nature.

Gas Masks for Chlorine Protection

A. Gas masks should be equipped with full-face piece and canisters designed to cope with chlorine.

B. Canisters should be stored and used according to manufacturer's recommendations for shelf and service life. Canisters should be disposed of upon reaching the expiration dates marked on all approved canisters.

C. Masks should be kept in cabinets located conveniently near (but not in) the chlorine room, where they may be obtained for emergency use without going through the chlorine gas area.

D. Preferably, a separate mask should be assigned to each employee concerned with chlorine leaks, including mechanics and pipe fitters required to work on

chlorine apparatus. Only through such procedure can the mask be permanently fitted to the face of the person who will wear it, so that no time will be lost adjusting masks in an emergency.

E. One employee should be held personally responsible for records of the condition of all masks. Semimonthly gas mask drills should be held, and each employee should be required to test his mask for leaks such as may occur through loose eyepieces, faulty tubing connections, defective or worn spots, and loose canisters.

F. Mask repairs should be made only by an employee trained for the work, and it is advisable to keep repair parts on hand for this purpose, as well as extra canisters for emergency use. An employee who is properly trained to detect and discard unsafe masks should make frequent inspections of each gas mask in service.

G. For emergency use in heavy concentrations of chlorine in confined spaces, all chlorine-using installations should have on hand either a hose mask supplied with air of a self-regenerating oxygen mask.

H. All employees should be warned that carelessness and foolhardy exposure to chlorine gas should be avoided and that no one can build up immunity to chlorine gas.

I. If an employee is caught in a chlorine gas area without a mask, he should leave immediately, avoid panic, keep his mouth closed, refrain from coughing and deep breathing, and keep his head high as possible until fresh air is reached.

J. An adequate supply of ammonia solution (10%) should always be kept on hand to test for chlorine leaks.

K. A copy of all chlorine safety instructions should be exhibited at some conspicuous point just outside the chlorine room and a copy should be placed in the first-aid kit.

Chlorine Exhaust Ventilation

A. Each chlorinating plant or room should be provided with an adequate ventilating system that is designed for the removal of chlorine gas resulting from leakage.

B. Because chlorine gas is heavier than air and has a tendency to concentrate near the floor in the low spots of a room, the vents or grilles for removing air contaminated with chlorine should be placed in the floor or scale pits or as near the floor as possible. Such openings should be near the center of the room or at the end of the room opposite the entrance. The exhausts from this system should go out through the roof or to a suitable outside location. Exhausts should never be situated near other ventilating systems. Motors and fans for the installation should be stationed outside the chlorine room, preferably on an upper level.

C. Every employee using or handling chlorine should be familiar with the location of the switches for starting the ventilation system in the plant. These should be convenient to, but outside of, the rooms where chlorine equipment is used and should be clearly marked with large lettered signs and directional arrows.

D. Chlorine ventilating systems should not be provided with covers that must be removed before the system can be effective. Exhaust openings should be so located that covers are not required.

E. Ventilation can be provided with a combination fresh-air and exhaust system consisting of fans that force fresh air into the room through openings near the ceiling and other fans that draw off chlorine-contaminated air in the room through vents in the floor. Such installations should be designed with enough capacity to provide a complete air change in the chlorine room at least every 3 minutes. The inlet and exhaust fans should be coupled electrically so that failure of the exhaust fan will not cause the inlet fan to blow the chlorine gas to other rooms in the building.

F. Frequent drills should be held for all employees concerned with handling ventilating systems, and equipment should not only be maintained in good condition, but tests should be conducted to see that all apparatus is operating properly.

G. Room arrangement is a prime function of personnel safety and equipment protection. If a choice of arrangement is available, the chlorine room should be constructed so it can be entered only from the outside of the building. There should be no interconnecting door between the chlorine-storage area or the chlorine feeders and the rest of the plant.

Chlorine Room Temperature

A. If the chlorine scale room is separate from the chlorine feeder room, the air temperature in the latter should be about 5º higher than that in the former.

B. Lower temperatures in feeding equipment may cause condensation of the gas to form liquid chlorine, creating trouble with the feeding equipment. The so-called "sludge" of liquid chlorine has been known to burst rotameter tubes and thin-walled gas lines on feeders.

C. Temperatures in chlorine equipment rooms or buildings should be maintained between 70° and 80° F.

First Aid for Chlorine Exposure

A. Remove the injured employee at once to the open air away from chlorine fumes.

B. Call an ambulance immediately.

C. Place the patient flat on his back, with his head and back slightly elevated. Supply blankets if necessary; keep him warm and quiet because rest is essential. Because splashes of liquid chlorine and chlorinated water destroy clothing and may cause irritation and acid burns, remove or cut away affected clothing.

D. If the patient is unconscious and breathing has apparently ceased, start artificial respiration immediately. Call the fire department rescue squad, if such emergency aid is available, but be sure that Pulmotor or other mechanical means of resuscitation is not used, because of the danger of rupturing the lungs. The patient may be greatly aided by the application of oxygen with proper equipment. Oxygen delivery should be started immediately and if the patient has stopped breathing start artificial respiration. The use of a mechanical respirator with a maximum pressure of 13 mm of mercury is recommended.

E. Give nothing by mouth.

F. If the eyes are slightly irritated, wash them with boric acid.

G. To aid skin affected by liquid chlorine, neutralize with a weak solution of sodium bicarbonate and apply loose dressings of a standard burn ointment or carrion oil.

Note: Post a copy of first aid instructions in a conspicuous place near the first-aid kit and be sure that proper first-aid supplies are kept on hand in a convenient location for emergency use.

Field Chlorination

A. Know the rules and regulations for the safe handling of chlorine and first-aid treatment for chlorine gassing.

B. Check and make sure that the gas mask and all other safety equipment are present.

C. If possible, set up equipment for water main disinfection a safe distance (at least 100 yards) from the nearest occupied building.

D. Observe all safety precautions in connecting apparatus and equipment and use approved fittings.

E. Make certain that hoses are in good condition before connecting them to the cylinder and the main.

F. Be sure that the water in the main is flushing before the chlorine is added.

G. After the equipment is connected, open the chlorine valve of the cylinder and test for leaks.

H. Open rotameter or gas header valve and again test for leaks.

I. In order to avoid water backup into the chlorine apparatus and the cylinder when a vacuum chlorinator is not being used, make sure that the chlorine tank pressure is approximately 25 poss. more than the operating pressure desired; also, be certain that the operating pressure is approximately 5 poss. more than the backpressure from the water main.

J. After all equipment has been tested for pressure and leaks, proceed to open the discharge valve and adjust the feed for proper operation; continue testing for leaks while disinfecting.

K. Never attempt to repair a chlorine hose with tape or clamps; always use a new replacement. Hose should be pressure-tested with CO2 and kept dry. Obstructions or kinks in a hose line may cause it to burst.

L. When it is necessary, particularly in cold weather, to raise the temperature of chlorine cylinders to increase the gas pressure, they should be heated in a suitable iron drum that is kept approximately half full of water. Cylinders should not rest on the bottom of the drum, but in a cradle or stand that will hold them at least 3" above the bottom of the drum. Apply heat by torches or other equipment to the bottom of the drum only. Do not allow the temperature of the water bath to exceed 70o-80o F. Keep the cylinder of heating gas on the windward side and at least 10' away from the chlorination equipment.

M. Equip field-chlorinating equipment with proper pressure gauges so that hose lines and lightweight connections are not subjected to excessive pressures. The procedure of connecting a chlorine cylinder directly to a chlorination cock is very unsafe.

N. After the proper dosage is obtained, shut off the chlorine gas at the tank and keep the main flushing valve open for not more than 1 minute. If the vacuum apparatus is not being used, it is advisable to flush the hose and equipment immediately with carbon dioxide gas before shutting the chlorination cock and disconnecting the hose.

O. Watch out for a chlorine gas pocket in the main when removing the silver delivery tube from the corporation cock. Wear a gas mask when performing this operation.

P. During chlorination, check a hydrant or a suitable sampling place ahead of the point of chlorination for possible backup of chlorinated water in the main.

Q. Take every precaution to prevent chlorine fumes from escaping to the air, particularly in residential areas. If the foregoing precautions are observed and direct gas feed equipment is properly flushed with carbon dioxide before disconnection, there should be no noticeable release of chlorine.

R. When using high-test hypochlorites for solution feeding, wear rubber gloves and aprons, a dust mask, and goggles or a face shield. If a considerable amount of dust arises, wear a chlorine gas mask.

S. Use caution in handling high-test hypochlorites, both dry and liquid. Protect the eyes and do not breathe hypochlorite dust. Remove clothing immediately if it becomes contaminated with these materials.

T. Use proper warning devices to keep unauthorized persons away from the area.

LOCKOUT/TAGOUT PROGRAM

DEFINITIONS

Electrically Powered Equipment includes that driven directly by air, gas, oil, water, or steam under pressure, internal combustion engines, or similar energy sources that are not directly adaptable to electrical shut down.

Lockout is the act of padlocking and tagging a switch, lever, valve, gate, or other isolating device in the "off "position. An isolating device is an electric circuit breaker, a disconnect switch, a manually operated switch or valve, a slide gate, a slip blind or a "figure 8" blind for blanking off piping or similar device. Most isolating devices have a lockout means built in. However, some may require modification before locks can be used. A lockout means shall accommodate more than one padlock so that if more than one employee or craft is working on the equipment, each can use its own padlock for absolute protection.

Tagout is the act of placing a switch, lever, valve, gate or other isolating device in the "off" position and affixing a tag to the device that warns others to leave it alone. A tag like the one shown in figure 1 should be affixed to the isolating device in question by a string, wire, or adhesive. The tag should be placed in a conspicuous location and should be placed in such a manner that it effectively blocks the starting mechanism which would cause hazardous conditions should be equipment be energized. It should be understood, however, that tagout alone does not offer the positive protection of lockout and tag, and therefore, when possible, the lockout procedure should be used.

PREPARATION FOR TAGOUT OR LOCKOUT

Employees should always be certain that the correct isolating device has been locked out and tagged. Some equipment necessarily has more than one disconnecting device which must be opened to complete the de-activation electrically and mechanically. The main disconnect devices for machinery should be clearly identified so that it is unnecessary to trace shafting or wiring. Any time the employee is not certain which device controls the equipment; he should check with his supervisor for positive direction. This is doubly important when devices are remote from the equipment, or on master panels containing several devices. If the installation is a complex one with remotely located disconnecting
devices, pre-planning will be necessary. Under these circumstances and when any uncertainty exists, the employee should consult with his/her supervisor and obtain
complete agreement on the plan procedure. It is also extremely important that any changes in function or circuitry be immediately shown on the circuit diagram or machine drawings to facilitate lockout procedure.

RED TAGGING UNSAFE EQUIPMENT

When equipment does not meet federal, state, or local safety standards, it will be unsafe. Once equipment is identified as unsafe, it will be removed from service and red tagged. Perform the following steps:

Inform the operator of the unsafe condition.

Inform the supervisor directly responsible for the equipment in question.

Affix the red tag to the master key for maximum visibility. Be sure the tag is filled out properly.

The red tag will remain in place until the unsafe condition is corrected, re-inspected, and logged.

The red tag is then removed by the supervisor, but only after a completed inspection.

GENERAL LOCKOUT AND TAGOUT PROCEDURES

The following general lockout and tagout procedures are recommended for electrically powered equipment and mechanically powered equipment. Mechanically powered equipment includes that driven directly by air, gas, oil, water, or steam under pressure, internal combustion engines, or similar energy sources that are not directly adaptable to electrical shut down.

1. Notify the supervisor in charge of the equipment of the proposed work and obtain his/her approval.

2. Shut down the equipment by normal stop procedure (depress STOP buttons, open toggle switches, shift lever, operate valve, etc.)

3. Turn main disconnect switches or circuit breakers or mechanical isolating device such as a valve, lever, etc., to the safe position.

4. Lockout (tag and padlock) or tagout the switch in the "off" position for the mechanical isolating device in the safe position using the "danger-do not start" tag. Each person must perform his/her own personal tagout or lockout, and this applies even though someone else may already have taken the equipment out of service. If the equipment or machinery has not already been tagged by another group or individual, it should be done at this time. This tag should remain in place until the equipment is ready and safe to return to service.

5. After lockout, try the disconnect or switch handle or the mechanical isolating device to make certain it can not be moved the "on" position. After either tagout or lockout, try the machine's start controls to make certain the main switch is open, or the isolating device has shut down the equipment. When electrical work is involved, blade opening

must be verified visually or by phase-to-phase and phase-to-ground meter readings.

TAG AND LOCK LOW AND MEDIUM VOLTAGE

When working on equipment that operates on low voltage (0 to 660 volts) or medium voltage (661 to 1000 volts), it shall be tagged and locked to prevent accidental starting, which might cause injury or death. Only properly trained and qualified personnel may work on electrical circuits or equipment. Before starting work, perform the following steps:

1. Inform the operator of what is to be done.

2. Make sure you place the tag and lock on the proper switch before beginning work.

3. Ensure that the equipment cannot be placed in operation without your knowledge and permission.

4. The equipment to be worked on must be locked out at a primary power source.

5. The tag shall include the name of the person doing the work, the date, and reason.

6. Everyone is equipped with their own locks and tags. Only the person who locks and tags the equipment can remove it.

7. *Never* remove another person's lock or tag. If your shift ends before completing their job, your lock should only be removed after the equipment has been secured by another lock and tag.

8. If more than one person is working on a piece of equipment, each person shall have their own lock and tag on it.

TAG AND LOCK MECHANICAL

When working on equipment, it shall be tagged and locked to prevent accidental starting, which might cause injury or death. Before starting work, perform the following steps:

1. Inform the operator of what is to be done.

2. Make sure you place the tag and lock on the proper switch before beginning work.

3. Ensure that the equipment cannot be placed in operation without your knowledge and permission.

4. The equipment to be worked on must be locked out of a primary power source. The tag shall include the name of the person doing the work, the date and reason.

5. Everyone is equipped with their own locks and tags. Only the person who locks and tags the equipment can remove it.

6. *Never* remove another person's lock or tag. If your shift ends before completing the job, your lock should only be removed after the equipment has been secured by another lock and tag.

7. If more than one person is working on a piece of equipment, each person shall have their own lock and tag on it.

SPECIFIC PRECAUTIONS

1. No one other than electrical or other authorized personnel should open an enclosure to operate a disconnect device therein.

2. Push buttons, toggle switches, pressure switches, limit switches, and similar devices should not be considered as lockout or isolating devices.

3. Pulling a fuse alone should ***never*** be used as a substitute for lockout or tagout. A pulled fuse is no guarantee that the circuit is dead; there is nothing to stop someone from replacing the fuse. Where one main switch feeds several motors, however, and each motor is separately fused but not switched, de-energizing the main switch might shut down equipment unnecessarily. In such a case, tagout can be accomplished by removing the fuse and disconnecting, taping, and lagging out the wires from the load side fuse clips.

4. When locking out mechanically powered equipment, attention must be given to residual air, gas, steam, water, or oil pressure in lines, accumulators and cylinders. Operating a valve might result in unexpected cycling of equipment with consequent chance of injury to personnel or equipment danger.

RESTORATION OF EQUIPMENT TO SERVICE

When the worker is certain that the job is complete, and that the equipment is safe to operate, he should remove his padlock and/or the white personal danger tag. An individual should ***never*** permit anyone else to remove his personal danger tag. If he leaves the job before the work is complete, and someone else is carrying on the repair, he should remove his padlock and/or personal danger tag only after the relieving individual has placed his padlock and tag on the effected equipment.

There may be times when the person who has tagged out or locked out equipment may not be available when the equipment must be started. In such circumstances, a maintenance supervisor who has a thorough knowledge of the process and equipment

and who has investigated all circumstances, related to the tagout or lockout, particularly from the viewpoint of personnel safety, can remove the danger tags or locks for his particular crafts. The supervisor shall be responsible for communicating such action to those crafts.

LOCKOUT CONTROL

The following general rules are adopted regarding locks and their use:

1. Effective lockout control can be maintained only by constant supervision and by training employees in the safe routine.

2. For identification, locks should be numbered and painted various colors to identify the user and the department.

14. To make lockout systems operable, the city departments should buy either
equipment with built-in locking devices or equipment designed for the insertion of padlocks. In older facilities, it may be necessary for the respective departments to construct attachments to which can be extended
and locked in position to prevent operation of control handles can be devised as isolating devices.

14. Only locks made by a reputable lock company should be used by maintenance workers. Key operated locks are preferred over combination locks. No two locks should be the same, and the pattern of the keys should be checked to see that each key fit only one lock.

SUMMARY

Often, the most difficult problem to overcome in implementing a lockout or tagout procedure is the assumption by a person working on the equipment that the job is too small to merit tagging and locking out. Yielding to the temptation to bypass this procedure may cost a life. Intermittently operating equipment such as pumps, blowers, fans, and compressors are harmless when not operating; but it must not be assumed that because such equipment is not functioning that it will stay that way.

The procedures outlined above can provide a basis for the establishment of specific tagout and lockout procedures for all operating and maintenance operations. The procedures outlined should be regarded as basic safety requirements. Some workplace conditions may require more stringent procedures to ensure safety of personnel and equipment.

EXCAVATION/TRENCHING

The following policies/procedures/rules shall be followed by all City of Kennett supervisory personnel during all excavations/trenching operations. Each supervisor is responsible for training his/her employees in company safety policy concerning excavation. Employee training aids are contained in Appendix I.

DEFINITIONS

Excavations any manmade cavity of depression in the earth's surface, including its sides, walls, or faces formed by earth removal and producing unsupported earth conditions by reasons of excavation.

Trench a narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.

Benching a method of protecting employees from cave-ins by forming the sides of an excavations in one or a series of horizontal levels or steps usually with vertical surfaces between.

Shield a structure that can withstand the forces imposed on it by a cave-in and thereby protect employees within a structure.

Shoring a structure such as a metal, hydraulic, mechanical or timber system that supports the sides of an excavation to prevent cave-ins.

Sloping forming the sides of an excavation to prevent cave-ins by sloping the sides to an angle not steeper than one- and one-half horizontal to one vertical (34 degrees measured from the horizontal).

GENERAL REQUIREMENTS

a. Remove or support any surface encumbrances that are hazardous to employees

b. Determine the location of any underground utility or other installations that may be encountered during excavation. Support or remove these installations as necessary for employee protection.

c. Structural ramps for access/egress shall be designed by a competent person and shall use walking surface treatments to prevent employee tripping and slipping. Stairways, ladders, or ramps shall be in trenches more than 4' deep to require no more than 25' of lateral travel.

d. Provide employees exposed to vehicular traffic with high visibility vests.

e. Do not permit employees to get underneath loads handled by lifting or digging equipment. Employees shall stand away from vehicles being loaded/unloaded to prevent being struck by spillage or falling materials.

f. Provide a warning system for mobile equipment operators who cannot see the edge of the excavation: barricades, hand/mechanical signals, logs.

g. Prevent employee exposure to oxygen deficient or hazardous atmospheres in excavations by providing atmospheric testing, ventilation, and respiratory protection equipment as appropriate. Have emergency rescue equipment available where hazardous atmospheres exist.

h. Do not allow employees to work in excavations where there is accumulated water or it is accumulating unless adequate protection is used, such as shielding/support against cave-ins, dewatering methods, or safety harness/lifeline.

i. Use shoring, bracing, or underpinning to ensure stability of structures adjacent to the excavation.

j. Protect employees from loose rock or soil falling or rolling from an excavation face by removal of material or installing protective barricades. Protect employees from materials failing or rolling <u>into</u> excavations by keeping soil and other material and equipment at least 2' from the edge of the excavation or by use of retaining devices.

k. Conduct inspections daily, or more frequently if conditions warrant, for evidence of possible cave-ins, protection system failures, hazardous atmospheres or other hazardous conditions. Correct conditions as necessary.

l. Provide walkways or bridges if employees must cross over excavations. Include standard guardrails if the public must cross over. Provide barricades or other protection against falling into excavations.

PROTECTIVE SYSTEM REQUIREMENTS

Each employee in an excavation shall be protected from cave-ins by an adequate protective system except when:

- Excavations are made entirely in stable rock; or
- Excavations are less than 5 feet in depth and examination of the ground by a competent person provides no indication of potential cave-in

Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee.

Members of support systems shall be security connected to prevent sliding, falling, kick outs, or other predictable failure.

EXCAVATION SAFETY RULES

1. Excavations must be barricaded to protect pedestrians and vehicles and proper access provided.

2. Spoil dirt may be used to barricade one side of a ditch or similar excavation - all dirt must be piled at least 3 feet back from edge of the excavation (and must be at least 3 feet high when used as a barricade).

3. Barricade excavation areas before “Hole Is Opened” or ahead of work progress.

4. Excavations must be sloped or shored when deeper than 5 feet.

5. Check all excavation walls before entering and after a heavy rain or thaw. Check shoring daily or more often in extremely wet weather.

6. An excavation safety/checklist is required before entering an excavation when deeper than 5 feet is included in this manual.

7. Nobody is permitted in an excavation when equipment is working next to the edge.

EXCAVATION/TRENCHING CHECKLIST

	*	Remove/support surface encumbrances.
	*	Determine location of underground utility or other installations.
	*	Structural ramps designed with surface treatments to prevent tripping/slipping. Stairways, ladders, and ramps located in trenches more than 4' deep designed w/no more than 25' of lateral travel.
	*	High visibility vests provided.
	*	Instruct employee to stand away from vehicles handling, lifting or digging equipment while being loaded/unloaded.
	*	Warning systems such as barricades, hand/mechanical signals, logs, etc., provided for mobile equipment operator.
	*	Provide atmospheric testing, ventilation, and respiratory protection equipment.
	*	Provide adequate protection in work area where water has accumulated during excavations, i.e. shielding/support against cave-ins, dewatering methods, or safety harness/lifelines.
	*	Shoring, bracing, or underpinning used to ensure stability of structures.
	*	Employees protected from loose rock or soil falling or rolling from an excavation face by removal of materials or installing protective barricades.
	*	Daily inspection conducted.
	*	Walkway or bridge provided for crossing over excavations. (Standard guardrail included if used by public.)
	*	Excavation made entirely in stable rock.
	*	Adequate protective system provided in excavation to protect from cave-ins.
	*	Protective system has capacity to resist all load without failure that are intended or could be expected to be applied or transmitted to the system.
	*	Slopes and configurations of slowing and benching systems selected/constructed by employee.
	*	Support systems security connected to prevent sliding, falling, kickouts or other predictable failure.
	*	Barricades provided for excavation areas. Spoil dirt may be used to barricade one side of a ditch or similar excavation (must be 3 feet back from edge and at least 3 feet high).
	*	Excavation area barricaded before hole is opened or work progresses.
	*	Do not enter an excavation when equipment is working next to area.

TRENCHING & EXCAVATIONS
FIELD CHECK-LIST

Before Trenching or Excavation

CHECK:	Soil conditions or other material to be dug.
CHECK:	Proximity to utilities, buildings and sources of vibrations.
CHECK:	Owners of utilities, service, or transmission piping, etc., and arrange for shutdown or relocating of facilities, if necessary.
CHECK:	For previously disturbed ground.
CHECK:	For trees, boulders, or other employee hazards.
CHECK:	Adequacy and availability of all equipment, including personal protective gear, shoring materials, signs, barricades, and machinery.
During Trenching or Excavation	
CHECK:	For changing ground conditions; particularly after rainfall.
CHECK:	For possible oxygen deficiency or gaseous conditions.
CHECK:	Adequacy of shoring and/or sloping as work progresses.
CHECK:	For maintenance of entrance and exit facilities.
CHECK:	All sheeting, bracing, shoring and underpinning.
CHECK:	For changes in vehicular and machinery operational patterns.
After Trenching or Excavation	
CHECK:	Depth of trench or excavation, its sloping and shoring.
CHECK:	Sloping of banks, sides and walls in relation to depth of cut, water content of soil; vibrations.
CHECK:	Entrance and exit facilities.
CHECK:	Location of heavy equipment – power shovels, derricks; trucks.
CHECK:	That excavated material is two feet or more from edge of opening.
CHECK:	The adequacy of portable trench boxes or trench shields, if used.
CHECK:	For correct positioning of cross braces or trench jacks to prevent sliding, falling, or kickouts.

EXCAVATION AND SHORING

Shoring is employed in many construction operations. Excavation shoring, as concerns building excavations and trenches, is intended for the protection of workmen and property, and often the general public as well.

Men working in excavations must always know much of their safety depends upon themselves. Even though there is a daily inspection of bracing systems, certain conditions may arise suddenly that come to the attention only of the man on the job. You must be able to recognize dangers when you see them and report them before they cause injury to yourself or those around you.

Accidents such as falls or being struck by objects in and about excavations and trenches often result because workmen fail to follow the safety instructions that have been given them.

Shoring presents problems and hazards. That is another of the reasons why safety education has become so important in the field of construction.

One of the major purposes of shoring is to protect you while you work in the excavation. Bracing systems are intended to prevent sliding, slipping, caving, squeezing, or any other movement of the face of the excavation that could endanger men in the excavation.

At times, soil conditions make it possible to slope excavations, but in many cases the sides must be supported by shoring. Regular physical inspection should be made of faces and banks where there may be loose materials. Any surface with dangerous material should be scaled. Workmen should not work one above another where there is a danger of falling rock or materials.

Shoring of adjacent buildings may be necessary when their walls are weakened by excavation. Sidewalks, if undermined during construction, require shoring for the protection of the public and the men working below.

Always make use of stairways, ramps or ladders when you enter or leave an excavation. Climbing or jumping is hazardous.

Because shoring is often subjected to considerable pressures, it demands regular inspection. Every workman engaged in excavation must take the responsibility of helping to check on shoring because your own safety is at stake. If you detect any unusual conditions you must report them immediately.

When using screw jacks in shoring, be careful of them slipping and throwing you forward with jacking in order to reduce the hazards due to failure or slipping of jacks.

In general, you should not work under structures or other objects that are supported by jacks alone.

Operators of equipment and all workmen on excavations must be alert to the danger of shoring and walls being struck by swinging loads.

TRENCHING OPERATIONS

Trenching operations account for many injuries. Accidents can happen to men working in trenches, to other workmen as a result of excavated materials, and to men working in the vicinity of trenches.

As is the case with most accident situations, a few simple precautions take most of the risk out of trench construction.

First, men working in trenches must have hard hats and should wear sturdy shoes.

Men should be safely spaced out in a trench unless there is a necessity of working together. They should also stay out of the immediate area of excavating equipment, and not work ahead of the shoring.

Workmen are sometimes injured by slides of earth or rock into the trench in which they are working. All excavated materials should be placed a safe distance back from the edge of the trench. Men should check with their supervisor for instructions as to how far back material should be placed.

Even when this is done, large heavy objects can roll or slide down the incline and into the trench. Tools and rocks should either be placed on the outer slope of the excavated materials, or else on the other side of the trench if the surface is flat.

When men are working on hard surface roads where a flow of traffic is being maintained, it is important that small stones be removed off the road. Stones are sometimes thrown with great speed by the tires of passing cars and can cause serious accidents.

Broken arms and legs and other injuries can result when workmen fall into construction trenches. They result because men fail to look where they are going, when they walk too close to the edge, or when they attempt to leap across the trench.

Rocks and tools thrown near the edge are not only a hazard to men working in the trenches but can cause falls into the trench by men walking on the surface.

Use extra care in venturing near the edges of trenches and other excavations when the weather is bad and there are icy or muddy conditions.

TRENCH EXCAVATION

A necessary consideration in the planning of sewer, pipeline and similar subsurface work by the area cover (trench and backfill) method is preventing trench wall cave-in and soil movement. Either or both may result in death of serious injury to workers, plus damage to adjacent structures, utilities, and facilities.

1. The hazards of trench excavation are:
   a. Death by suffocation or crushing when falling soil buries a worker.

b. Materials falling on a worker in the trench.
c. Falls of persons when climbing into or out of the excavation.
d. Men working too close together.
e. Stumbling over equipment or excavated material or falling into the trench.
f. Encountering toxic, irritating or flammable gases.

2. Caving of side walls is the worst hazard. Most accidents of this type occur because:
   a. Taking a chance without shoring; or inadequate shoring to reduce cost.
   b. Inadequate knowledge of the shoring necessary or misjudgment of soil stability.
   c. Failure of apparently adequate shoring due to unexpected or transient loads superimposed on the shoring structure or ground surface at the edge of the trench, or from vibration due to traffic.
   d. Use of defective shoring material.
   e. Failure to maintain shoring properly after changes incidental to operations, or after damage by washouts or heavy rains.
   f. Failure to place removed soil at a safe distance from the edge of the excavation.
   g. Undercutting of trench walls by trenching machines not properly leveled.

3. Proper sheeting and bracing (shoring) will prevent both cave-in and probable soil movement.

4. Proper trench shoring cannot be reduced to a standard formula. Each job must be treated an individual problem, because of the variable conditions existing on each job. Some of the important factors to be considered in planning the job are:

   a. *Nature of soil structure.* Soil structure varies from hard rock at one extreme to soil containing enough water to produce hydrostatic pressure. Hard rock may contain faults in strata which make it unstable when cut through. Normal moisture content in soil affects its stability; possible variations in moisture content must be considered in determining margins of safety. Sandy soil, or soil which has been backfilled, is very unstable and usually requires tight sheeting where the trench depth exceeds four feet.
   b. *Fluctuating weather and moisture conditions.* Rainfall, freezing and thawing, overflow of adjacent streams, storm drains, or sewers, and melting of snow all produce change in the condition of the soil that should be considered. Water from any source probably will increase the rate of seepage and may reduce the cohesion of the soil or swell the soil thereby increasing the pressure on the sheeting and bracing. A trench in frozen ground may be safe with little or no sheeting; thawing may cause the entire bank to cave.
   c. *Proximity of other structures or sources of vibration.* Shoring not otherwise necessary may be needed to prevent dislocation of foundation soil or structure of an adjoining building, or of curb lines, trees, or utility poles. Also, to be considered is vibration which may arise from machine operations (as from punch presses or forging hammers) in nearby buildings, passing vehicular or railway

traffic, or blasting. Equipment used on the job (such as material trucks, pile drivers, air spades, or power ramrods) may also produce vibration which should be considered in planning shoring.

d. *Trench dimensions.* As width of the trench increases, the cross braces or struts must be increased in cross-section to maintain the necessary rigidity. Remember that with soil possessing sufficient cohesion to act as a solid, the side pressures reach a maximum at a point slightly higher than one-half the depth of the cut… and with dry granular and saturated soils, the side pressures increase in proportion to the depth of the excavation.

5. Standard shoring tables are available in any safety manual and should be consulted before excavation begins. Greater factors of safety should be provided as required by job conditions. Heavier than minimum sizes of materials will usually be required if the trench is to be kept open for a considerable period.

EXCAVATIONS

Excavations are still considered amount the most hazardous of Construction operations. Almost all injuries and deaths that occur in trenching or excavation work are the result of ignorance or disregard of a few basic safety rules. Take a moment and think about the most violated safe work practices. For example:

1. According to OSHA, when must a trench or excavation be supported by shoring, sheeting, bracing or sloping? (Answer) Five feet or more – when the soil is particularly unstable or when workers will be working with their heads below the ground surface level such as working on hands and knees.

2. What is the minimum distance excavated material may be piled from the edge of the excavation? (Answer) 24 inches. Furthermore, materials such as pipes, rounded boulders, etc., should be adequately secured so that they will not roll into the trench.

3. What is the maximum distance a worker should have to travel to reach a ladder leading out of the trench? (Answer) 25 feet, and the ladder should extend three feet above the ground level surface.

4. What is the "Angle of Repose"? (Answer) The greatest angle above the horizontal plane at which excavated material will lay without sliding.

5. Do sources of vibration such as nearby vehicles, heavy equipment, railway traffic, blasting or pile drivers materially effect soil stability? (Answer) Yes. Vibrations are a frequent cause of cave-ins.

6. When the slope of the excavation approximates the angle of the excavated material, is it reasonable to assume the excavation is a safe work area? (Answer) Generally yes.

7. The usual compliance time to correct an unsafe excavation condition is: 1. 1 day, 2. 3 days, 3. At Once, 4. 5 days? (Answer) #3 – at once.

8. Equipment working near high voltage electric power lines shall have a clearance from the point of operation to lines of at least: 1. 6 feet, 2. 15 feet, 3. 20 feet, 4. 10 feet? (Answer) #4 – 10 feet.

9. What is the most common cause of trench and excavation cave-ins? (Answer) Inadequate shoring in an intent to cut cost or save time.

10. What is the only safe procedure to follow when installing or removing shoring systems from trenches or excavation? When installing shoring, always work from the top down. Such installation should closely follow the digging. When removing shoring systems, work from the bottom up. Jacks or braces should be released slowly, and, in unstable soil, ropes should be used to pull out the jacks or braces from above after the men have cleared the trench.

In summary, proper trench shoring cannot be reduced to a standard formula. Therefore, each job must be treated as an individual problem because of the variable conditions existing on each job. Whenever "things do not look right", the workers should immediately leave the trench and discuss the situation with the foreman.

CONFINED SPACE ENTRY

I. Purpose and Policy

The purpose of this program is to establish procedures to protect City of Kennett employees from the hazards of entry into permit-required confined spaces. Under this program, the respective department will determine which spaces, will inform its employees of the existence and location of and the danger posed by such permit spaces, and establish, implement and publish a written Permit Space Entry Program which complies with the requirements of 29 CFR 1910.146.

II. Definitions

Acceptable Safe Level: means the atmosphere has at least 19.5% oxygen, is less than 10% of the lower explosive limit (LEL) and is below 10 PPM hydrogen sulfide (H2S).

Atmosphere means the gases, vapors, mists, fumes and dusts within a confined space.

Attendant (is not part of the rescue team; unless he/she is an observer) means a trained individual outside the permit entry confined space who acts as an observer of the authorized entrants within the permit entry confined space keeping in continuous, though not necessarily constant, communications with them, so the attendant can immediately call rescue services if needed.

Authorized entrant means an employee who is trained and authorized by the employer or the employers designate to enter a permit entry confined space. They must know the hazards they may face, be able to recognize signs or symptoms of exposure, and understand the consequences of exposure.

Confined space is any space which by design has limited opening for entry and exist; unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. The term “confined space” applied at all City facilities would include, but is not limited to:

* Storm Sewers
* Sanitary Sewers
* Water Storage Vessels
* Meter Vaults
* Tunnels
* Manholes
* Trenches
* Boilers
* Containerized Welding
* Lift Stations
* Air Handlers
* Small Equipment Rooms
* Tanks

Entry means the action by which a person passes through an opening into a permit-required confined space and includes ensuing work activities in that space. It is considered to have occurred as soon as any part of the entrant’s body breaks the plane of the opening into the space.

Entry permit means the written or printed document provided by the City to allow and control entry into a permit space. The content of each permit is based on the City's identification and evaluation of each hazard of that permit space, or class of spaces, and all procedures the City requires for protecting entrants from those hazards during entry. Each permit contains the information specified in paragraph (f) ("Entry Permit") of this standard.

Entry permit system means the employer's system for assuring safe employee entry into and work within permit entry confined spaces. (In accordance with CFR 1910.146.)

Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), serious injury or acute illness.

Hot work permit means the employer's written authorization to perform operations such as riveting, welding, cutting or burning, or heating that could provide a source of ignition.

Hydrogen sulfide (H2S) is a major toxic of interest in confined space entry for sewer workers also known as "Sour Gas".

Lower Explosive Limit (LEL) is the minimum concentration of a combustible gas or vapor in air which will ignite if an ignition source is present. LEL is based on methane.

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

Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-required Confined Space is any space which is large enough and so configured that an employee can bodily enter and perform assigned work, has limited or restricted means for entry and exist, is not designed for continuous employee occupancy, and has one or more of the following characteristics:

A. Contains or has the potential to contain a hazardous atmosphere.

B. Contains a material with a potential for engulfing and entrant.

C. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor which slopes downward and tapers to a smaller cross-section; or

D. Contains any other recognized serious safety or health hazard.

Rescue team means a group of two or more people designated and trained to perform rescues from permit entry confined spaces in their workplace.

Retrieval line means a line or rope secured at one end to a worker's chest-waist or full-body harness, or wrestles, with the other end secured to a lifting or other retrieval device, or to an anchor point located outside the entry portal to prevent it from falling or being drawn into the space.

III. City of Kennett Policy

A permit-required confined space may not be entered until the following is completed:

A. Confined space entry training has been completed and documented for all personnel involved. Schedule "F" contains the most recent training confirmation, and the personnel who have completed it.

B. A NEED for entering the space has been determined.

C. Pre-briefing before entering space has been conducted.

D. Confined space entry permit has been determined.

E. A trained rescue team is available, or on site.

F. All appropriate protective equipment is used.

G. All safety and air quality testing equipment are at the job site and functional.

H. If any of the above items are not met, "THEN ENTRY INTO THE CONFINED SPACE IS PROHIBITED". Employees not following these requirements will be dealt with according to the policy manual.

I. Entry into a non-permitted confined space will be allowed only if there are no non-atmospheric hazards present.

J. Make available any applicable material safety data sheets (M.S.D.S.) and attach to the permit should rescue or medical personnel treating an injured entrant need to review them.

IV. Procedures for Entry -- Permit-Required Space

A. Isolation of the Permit-Required Confined Space

All energy sources to the confined space shall be locked out and controlled. The purpose of this procedure is to ensure that employees are protected from unintended machine motion or release of an energy source when working in a confined space.

Install barriers around the opening as necessary to prevent an accidental fall-through and to protect entrants from external hazards.

Provide an attendant outside the permit space for the duration of entry operations to prevent unauthorized entry.

B. Equipment Mobilization

1. Obtain and use all ventilation equipment needed to comply with Paragraph D and air monitoring equipment needed to comply with Paragraph E.

2. Evaluate permit space conditions and perform pre-entry testing to the extent feasible before entry is accomplished.

3. Review procedures for summoning rescue and emergency services, for rescuing entrants, for providing necessary emergency services to rescue

employees, and for preventing unauthorized persons from attempting a rescue.

4. The requirements for harness, lifelines, breathing air, tripods, rescue winch, and protective clothing shall be documented on the permit.

   a. A safety harness shall be worn by all persons entering a confined space that would require a vertical lift to make a rescue. Backup lifelines shall also be attached to individuals to affect a rescue. A tripod, hoist, and retrieval winch shall be utilized.

   b. Reliable breathing air (self-contained) shall be worn in contaminated or dusty environments, where toxic concentrations are outside the set limits or where ambient conditions are subject to change, or where oxygen concentrations may drop below 19.5 percent. In IMMEDIATELY DANGEROUS TO LIFE ENVIRONMENTS (IDLH's) breathing air shall be provided.

   c. Supervisory personnel shall be present in situations which require the use of a SCBA.

   d. Special protective clothing shall be consistent with the potential exposure and be specified on the confined space entry permit.

C. Ventilation

1. Proper ventilation is used to provide a positive fresh air supply to the confined space as necessary to eliminate or control atmospheric hazards prior to entry and continuously during entry.

2. The open end of the supply duct(s) should be positioned to approximately 2 feet above the floor of the confined space. Ventilation equipment should be explosion proof.

3. The blower unit must be at least 10 feet from the opening of the confined space.

4. All rooms with forced air ventilation, shall be ventilated 5 minutes before entering or the designated time printed on the entrance cover.

D. Atmospheric (Air) Monitoring

Testing the air in a confined space prior to entering the space is required. Entering a confined space prior to utilizing the proper equipment to ensure the air is safe to breathe is prohibited. Before an employee enters this space, the internal atmosphere should be tested, with a calibrated direct-reading instrument.

Prior to the initial entry, after each interruption and during the entire job sequence testing shall be done for oxygen content, combustible gases, and toxic gases, in this order.

1. Monitoring shall be continuous while working in the confined space and until the last entrant leaves the permit space. Employees shall be made aware that confined space incidents that result in fatalities should be preventable since 95% of them are due to just five kinds of atmospheric hazards, which are:

   * Carbon Monoxide

* Carbon Dioxide
* Hydrogen Sulfide
* Flammable Gases
* Oxygen Deficiency

2. The air monitoring will be conducted by a trained and qualified person.
3. The first air measurement shall be made outside the confined space, near the opening.
4. A second air measurement shall be made directly at the opening to the space.
5. All subsequent measurements shall be made throughout the space with a probe or a remote sensor unit.
6. Air monitoring sequence shall be as follows:

   a. Oxygen tests must always be made first because most combustible gas meters are oxygen dependent. Too little oxygen may cause a low combustible gas reading. Too much oxygen, on the other hand, can cause a combustible gas meter to explode if gases and vapors are present in ignitable quantities.

   b. Combustible gases include both flammable and explosive gases and are measured next because in most cases the risk posted by fire or explosion is more immediate and life-threatening than exposure to toxic gases and vapors.

   c. Toxic gases are the final test and are extremely important, and its position in the sequence is not in any way intended to minimize the seriousness of this common confined space hazard.

Oxygen - Combustible - Toxic Atmospheres

The employee using an air monitoring unit must be properly trained in the use of the test equipment facilities with the hazards and authorized to perform the tests. This person will need to "check out" (log in date & battery strength) the instrument and check the last documented calibration date. If the meter has passed the designated calibration interval, or fails calibration, the employee must bring this to his/her supervisors' attention. Until the supervisor corrects the "problems" with the meter, it shall be taken out of service, dated and tagged.

V. Meter Detection Limits

A. Oxygen

1. Oxygen levels shall be between 19.5% and 23.5% for entry. Oxygen levels below 19.5% shall be considered an oxygen deficient atmosphere.
2. Any air with less than 19.5% oxygen shall not be entered without an approved self-contained breathing apparatus (SCBA).

B. Flammable/Combustible Gases and/or Vapors:

When the oxygen level exceeds 23.5% by volume, this is known as an oxygen-enriched atmosphere and represents a serious fire hazard.

1. Always test for oxygen first.
2. The acceptable safe level for flammable/combustible gases or vapors is 10% or less of the lower explosive limit (LEL) and is below 10% per hydrogen sulfide (H2S).

    b. Chlorine is not combustible/flammable but a strong oxidizer; never use water around chlorine gases.

    c. LEL for hydrogen sulfide is 4.3%.

    d. LEL for methane is 5%.

    LELS can be found in material data sheets.

C. Toxic Atmospheres:

Toxic gases can irritate skin, eyes, nose and throat. All can skill or injure the worker.

1. Toxic gases or vapors must be identified prior to monitoring. The confined spaces at the City of Gallatin and sanitary sewer distribution systems owned by the constituent municipalities have a potential to contain toxic gases or vapors.
2. Entry into the permitted space shall not be attempted if the gas or vapor exceeds its specified permissible exposure limit (PEL).
3. Toxic materials may not only pose an inhalation exposure but also a skin contact hazard. The proper personal protective equipment is also necessary.

VI. HOT WORK:

A. A “Hot Work Permit” must be issued to perform any hot work in a permit-required confined space. A “Hot Work Permit” means the authority’s written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

B. Hot Work operations shall not be permitted in a confined space if the atmospheric level of a combustible gas is more than 10% of the LEL or if the airborne dust, mist or fumes may present a potential explosive hazard.

C. Gas cylinders or welding machines that are used for Hot Work operations shall be placed outside of the confined space where the work is being performed.

D. Never take compressed gas cylinders into a confined space.

E. A fuel supply valve and oxygen valve shall be shut off outside the confined space, and the welding torch and hose shall be removed from the confined space during lunch period, overnight or for any prolonged period that the space is unattended.

F. All welding leads that are used in a confined space should be de-energized if work is suspended during the lunch period, overnight or for any prolonged period that the space is unattended.

VII. Special Work Practices

Consideration shall be given to the nature of the work associated with each confined space entry permit with necessary precautionary measures specified on the permit. Others in the work area shall be notified that a permit has been issued for personnel to work in a specified confined space.

1. A ground fault interrupter is required when greater than 24-volt electric tools or extension lights are to be used in confined space.
2. Compressed gas cylinders, other than breathing air, shall not be taken into a confined space.
3. Special additional ventilation and/or breathing air shall be required when cutting or welding is done within a confined space. Hoses and nozzles of cutting or welding equipment must be carefully checked before use in a confined space.

   Any potential fire hazard must also be reviewed, and the appropriate action taken. Should unusual operations such as welding, burning, or chemical cleaning be undertaken, prior approval of the Risk Coordinator should be sought.
4. Pneumatic tools shall be operated with compressed air only.
5. Only explosion-proof lighting is to be utilized in a confined space.
6. Open flames or smoking is prohibited in a confined space.

VIII. Entry Permit System

A. Before entry is authorized, an entry supervisor shall authorize the entry and sign the completed permit form. (An entry supervisor may also serve as an attendant or entrant at the time of entry.)

B. The permit will be available to the authorized entrants for their review and confirmation.

C. The permit shall be posted at the point of entry.

D. The permit cannot exceed the time required to complete the job, as stated in “Purpose of Entry”, or exceed the shift.

E. The entry supervisor can cancel a permit when a condition not allowed under the permit arises.

F. Permits shall be kept on file for one year. This includes any contractor permits.

G. A sample permit is provided in this manual.

IX. Entry Permit

The entry permit shall identify:

A. The permit space to be entered and the purpose, date and duration of the entry.

B. The name of the authorized entrants, the personnel serving as attendants, and the entry supervisor.

C. The hazards of the permit space to be entered.

D. The measures used to isolate the permit space and/or to eliminate or control the permit space hazards; (i.e.) lockout, purging ventilating and flushing of permit spaces.

E. The acceptable entry conditions.

F. Results and circumstances of any pre-entry tests.

G. Rescue and emergency services available and the means for summoning those services.

H. The communication procedures to be used by entrants and attendants.

I. The protective, testing, and communications equipment to be provided and used.

J. Any additional permits needed (such as for Hot Work).

K. Such other information as necessary to ensure employee safety.

X. Duties of Entrants

All authorized entrants shall:

A. Know the hazards that may be faced during entry, including the signs or symptoms and consequences of exposure.

B. Properly use the equipment required by the permit for safe entry.

C. Maintain constant communication with the attendant as necessary to enable the attendant to monitor entrant's status.

D. Alert the attendant of any warning sign or symptom of exposure to a dangerous situation or detection of a prohibited condition.

E. Exit from the permit space as quickly as possible whenever an order to evacuate is given, an evacuation alarm is activated, the entrant recognizes a warning sign or symptom of exposure or the entrant detects a prohibited condition.

XI. Duties of Attendants

A. The attendant must be in constant communication with the entrant.

B. The attendant must be able to notify THE DESIGNATED RESCUE TEAM in the event of an emergency without leaving the confined space area. This can be done either telephone or two-way radio. In the event of an emergency inside the confined space, the outside attendant must be able to send an alarm or signal to notify THE DESIGNATED RESCUE TEAM.

C. If a spill, fire or other incident should occur which may affect the attendant or those inside the confined space, the entrants in the space must be informed to leave the space.

D. The attendant must be familiar and know the potential hazards of the permit space and the signs, symptoms, consequences and behavioral effects of exposure.

E. The attendant must keep an accurate count of entrants.

F. The attendant must monitor both inside the confined space and outside the space and order evacuation under appropriate conditions.

G. The attendant must be familiar with proper operation of non-entry rescue equipment such as retractable tripod, winches, etc.

H. The attendant is restricted to non-entry rescues and must remain outside the confined space until relieved by another attendant.

I. The attendant must summon rescue and other emergency services as soon as the attendant determines the need for assistance.

J. The attendant must take appropriate action when unauthorized persons approach or attempt to enter permit space.

XII. Duties of Entry Supervisors:

The Entry Supervisor shall:

A. Know the hazards that may be faced during entry including the mode, signs or symptoms and consequences of exposure.

B. Verify that all tests specified in the permit have been conducted and that all procedures and equipment specified in the permit is available and in place before enforcing the permit and allowing entry to begin.

C. Review and re-evaluate entry conditions at appropriate intervals and upon transfer of responsibility to determine that acceptable entry conditions have been maintained.

D. Terminate the entry and cancel the permit when the entry operations covered by the permit have been completed or a condition not under the permit arises in or near the permit space.

E. Verify that rescue services are available and that the means for summoning them are operable.

F. Remove unauthorized individuals who enter or attempt to enter the permit space.

G. Notify Kennett Police Department dispatch to advise an entry into a confined space has been made so the Kennett Fire Department will be on alert.

COMMUNICABLE DISEASES

I. Policy Statement

The Purpose of this policy is to provide guidelines for City Employees in preventing the contraction of communicable diseases. This policy will be augmented by individual department policies which will further delineate procedures necessary to meet departmental responsibilities without sacrificing personal safety.

II. Policy

A. The policy of the City is to safeguard employees, and the public, who may meet the people who have, or are suspected of having, a communicable disease.

B. Employees are responsible for treating people fairly and humanely. When handling or assisting persons with medical afflictions, employees must be sensitive towards the person's condition and treat the person with respect.

C. Universal precautions must be observed whenever the possibility exists of meeting any body fluid.

D. Information regarding an employee, arrest, or any person, with a communicable disease is confidential. Access to such information is limited to staff who has a legal need to know. Written consent of the individual must be obtained prior to release of information except as required by law.

E. Each department will appoint an "Infection Control Officer", responsible for administration/implementation of this policy in the respective department.

III. Definitions

A. Exposure: Any situation where the possibility exists that an individual or object may have been contaminated by bodily fluids of an individual suspected of having a communicable disease.

B. Contamination: Physical contact with or transfer of body fluids from one individual suspected of having a communicable disease to another. The transfer of such body fluids to an item of equipment also constitutes exposure. These fluids may also be transmitted in the form of particles in the air as a result of a cough or sneeze.

C. Body Fluids: Liquid secretions including blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, nasal secretions, sputum, saliva, sweat, tears, urine, feces, and vomitus.

D. Communicable Disease: Those infectious diseases that are transmitted through contact with the body fluids of an infected individual.

E. Infectious Disease: Same as communicable disease.

IV. Procedures

A. Supplies

1. Each City department must maintain a supply of protective equipment for the hazards likely to be encountered.

2. Protective supplies will consist of, but are not limited to, the following items:

   a. Disposable latex gloves.

   b. Protective face mask that covers the nose and mouth area.

   c. Eye protection with vapor proof side shields.

   d. Barrier resuscitation equipment.

   e. Containers for disposal of needles and other “sharps”.

   f. Leather gloves for cleanup where puncture hazards exist.

   g. Heavy duty cleans up gloves for disinfection of contaminated equipment.

   h. Scrub brushes for use in disinfection procedures.

   i. Protective gowns for use during treatment or disinfection procedures.

   j. Barrier tape for isolating contaminated areas.

   k. Sealable plastic “Bio-Hazard” bags.

3. The Infection Control Officer of each department is responsible for assuring an adequate stock of supplies.

B. Property Contamination

1. When City issued or personal property is contaminated by blood or bodily fluids, employees will disinfect the items in accordance with this policy.

   a. Full protective equipment including protective equipment, protective eyewear, protective gloves, protective gown, and protective face mask must be worn for disinfection operations.

b. Contaminated equipment should be washed with a soap and water solution prior to disinfection to remove excess contamination.

c. Contaminated equipment must be disinfected with a 1:10 solution of bleach and water.

d. Fluids used during disinfection procedures will be disposed of in the sanitary sewer system.

e. Disinfected items will be washed thoroughly and wiped with disinfection solution and allowed to air dry before being returned to service.

f. Items that can not be adequately disinfected will be sealed in a “Bio-Hazard” bag and delivered to the Infection Control Officer for disposal.

g. Contaminated clothing must be either spot cleaned with solution or sealed in a “Bio-Hazard” bag for disposal by the Infection Control Officer.”

2. If it is determined that effective disinfection is not practical the employee will be notified by the Infection Control Officer, or immediate supervisor, to submit documentation for replacement of the articles.

   a. Documentation must include the time, date, and incident at which the articles became contaminated.

3. A change of clothing will be made available for the employee if his personal clothing becomes contaminated.

   a. In those departments where contamination is a daily hazard, employees are encouraged to keep a change of clothing in their work areas.

C. <u>Vehicle Contamination</u>

1. Disinfection procedures and equipment for vehicular decontamination is the same as those used for equipment disinfection.

   a. Whenever possible the Infection Control Officer should oversee the disinfection of the vehicle.

   b. Any excess contaminants should be disposed of in a sanitary sewer whenever possible.

   c. Clean up rags and excess contaminants must be placed in a sealed “Bio’Hazard” bag and disposed of in accordance with City Policy.

   d. Care should be taken when cleaning the seat, floor, or other areas where liquids may migrate.

D. Contamination of Individuals

1. A City accident report will be completed whenever an employee is contaminated or has reason to believe he/she has been contaminated.

2. An "Exposure Report Form" must be completed by the employee detailing all information relative to the contamination situation.

3. The Infection Control Officer, or officer in command if the Infection Control Officer is not present, will direct the employee on what testing procedures will be conducted to verify/disprove contamination.

   a. Testing to verify contamination will be conducted through Jefferson Memorial Hospital under the direction of the Occupational Medicine Program. This will be at the City's or its insurance carriers' expense.

4. Information received regarding exposure or possible exposure is confidential. It will not be disclosed to anyone other than the Department Head, Infection Control Officer, City Manager, Risk Management Coordinator, and the contaminated individual.

E. Infections Disease Training

1. City employee who face the possibility of occupational exposure to communicable diseases will receive appropriate training in their individual departments.

   a. The Infection Control Officer is responsible for developing an ongoing training program to explain the hazards present and appropriate preventative measures.

   b. The Infection Control Officer of each department will document training given and provide such documentation to the Risk Management Coordinator.

F. Immunization Program

1. In order to provide adequately for the safety of employees it is necessary to assure a minimum level of immunization protection for everyone.

2. Prior to employment, potential employees must comply with the following immunization requirements:

   a. Complete pre-employment physical examination and drug testing with the center chose by the City.

   b. Tetanus vaccination and Tuberculosis testing will be administered at the time of the physical examine, unless documentation of current vaccination/testing is provided to and approved by the City.

c. If a TB skin test is deemed “positive”, the potential employee will schedule a chest x-ray with their personal physician, at their expense.

    I. If results are provided to the City stating that the chest x-ray is “negative”, and the pre-employment physical examination and drug testing have been approved, the individual will be allowed to report to work.

    II. If the chest x-ray is deemed “positive”, the individual will not be allowed to work until approval is received from their personal physician.

    III. After appropriate follow up is completed, employees who are identified to be positive reactors will be evaluated annually for signs and symptoms and complete the “Annual Statement for Tuberculin Reactors’ through their private physician for the individual’s medical personnel file.

d. Refusing to comply with this policy will result in ending the possibility of employment with the City.

3. All employees must comply with the minimum requirements of the City’s immunization program.

    a. Required tests and vaccinations will be provided at City expense.

    b. Employees will receive a Tetanus vaccination at least once every ten years.

    c. Employees will receive a Tuberculosis test every five years, unless they have previously tested positive.

    d. Employees who have a “positive” TB skin test will be referred to their private physician for chest x-ray and evaluation for medication, at their expense.

        I. Employees who need medication will be referred to the closest appropriate facility.

        II. If the chest x-ray is deemed “positive”, the individual will not be allowed to return to work until approval is received from their personal physician.

        III. If the chest x-ray is “negative” the individual will be allowed to return to work.

IV. After appropriate follow up is completed, employees who are identified to be positive reactors will be evaluated annually for signs and symptoms and complete the “Annual Statement for Tuberculin Reactors’ through their private physician for the individual’s medical personnel file.

e. In the event of exposure to an infectious TB case, the employee will be tested as soon as possible. If negative tuberculin testing will be repeated in three months.

f. Refusing to comply with this policy may result in the termination of employment.

4. Personnel having a risk of occupational exposure to Hepatitis B may receive the Hepatitis B vaccinations.

a. Vaccinations will be coordinated by the Infection Control Officer of each department and with the Safety Officer.

b. Vaccinations will be provided at no cost to the employee.

c. Employees not wishing to receive the Hepatitis B vaccine, for whatever reason, must complete the City waiver form for Hepatitis B vaccinations.

d. Employees declining Hepatitis B vaccinations may receive it later, if they still have the possibility for occupational exposure, should they change their mind.

5. Personnel having a risk of occupational exposure to Hepatitis A may receive the Hepatitis A vaccinations.

a. Vaccinations will be coordinated by the Infection Control Officer of each department and with the Safety Officer.

b. Vaccinations will be provided at no cost to the employee.

c. Employees not wishing to receive the Hepatitis A vaccine, for whatever reason, must complete the City waiver form for Hepatitis A vaccinations.

d. Employees declining Hepatitis A vaccinations may receive it later, if they still have the possibility for occupational exposure, should they change their mind.

F. Pandemic Policy Information

In order to ensure that the City of Kennett is still operating to help protect and serve the citizens the following will occur.

1. Essential Staff will be required to work, either from the office or from home, depending on the situation. Non-essential staff may be required to be on call during their normal work hours incase of the possibility of being called in. Essential and non-essential staff will be defined by the Department Heads during a pandemic.

2. Mayor and City Counsel will release a detailed policy regarding a plan for the specific pandemic.

3. All city guidelines will be followed from the Loss Prevention Manual or the City handbook, unless superseded by Executive Order or Executive Policy that will be released from the Mayor and City Counsel.

4. The City of Kennett will follow **all** Centers for Disease Control and Prevention (CDC) policies regarding the specific pandemic.

EXPOSURE REPORT FORM

EXPOSED EMPLOYEE INFORMATION

Name:_____ Home Phone:_____

Social Security Number:_____

Address:_____

City:_____ Zip Code:_____

City Department:_____ Job Title:_____

INCIDENT INFORMATION

Incident Number:_____ Date:_____
Incident Type:_____

EXPOSURE DESCRIPTION

Exposure Date:_____ Exposure Time:_____

1. What body fluids were you in contact with?

   Blood:_____ Feces:_____ Saliva:_____ Sputum:_____
   Sweat:_____ Tears:_____ Urine:_____ Vomitus:_____

   Other (describe):_____

2. What was the method of contact?

_____ Needle stick with contaminated needle.

_____Blood or body fluids into natural body opening (e.g., nose, mouth, eye).

_____Blood or body fluids into cut, wound, sores, or rashes less than 24 hours old.

Please specify:_____

_____

_____Blood or body fluids on intact skin.

_____Other (describe specifically):_____

_____

3. How did the exposure occur? Be specific:_____

   _____

   _____

4. What action was taken in response to the exposure to remove the contamination (e.g. hand washing)?

_____

5, What personal protective equipment was being used at the time of exposure?

_____

_____

6. Please describe any other information related to the incident. Use a separate piece of paper if needed:

_____

_____

_____

SOURCE OF EXPOSURE

Name of Person (source of exposure):_____

Sex:_____ Receiving Health Care Facility:_____

_____

Transported by:_____

Persons Physician:_____

MEDICAL INFORMATION

1. Did you seek medical attention?_____ Date:_____

   If yes, where?_____

2. Did you contact Infection Control Officer?_____

   If yes, give date and time:_____

   Name of Infection Control Officer:_____

_____

EMPLOYEE SIGNATURE DATE

_____

INFECTION CONTROL OFFICER'S SIGNATURE DATE

COMMUNICABLE DISEASE FOLLOW-UP NEEDED? YES_____NO_____

COMMUNICABLE DISEASE EXPOSURE FOLLOW-UP FORM

Employee Name:_____ Exposure Date:_____

Incident Number:_____ Exposure Time:_____

Exposure Source:_____

Patients Communicable Disease Diagnosis:_____

_____

How was this diagnosis made known? Source name and phone number:_____

_____

Date diagnosis was made known to you:_____

Has employee ever received appropriate vaccination(s)? _____Yes _____No

If yes, which vaccination and when?_____

Please document all interaction (telephone, verbal, correspondence, or other) with employee or source (patient) treatment facility concerning this exposure:

DATE, SUMMARY OF PERSON CONTACTED, COMPANY, DISCUSSION, ETC.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

CITY OF KENNETT

INFORMED REFUSAL FORM

FOR HEPATITIS B VACCINE

Name (please print)_____

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

_____ _____

Employee Signature Date

_____ _____

Supervisor's Signature Date

CITY OF KENNETT
INFORMED REFUSAL FORM
FOR HEPATITIS A VACCINE

Name (please print):_____

I have been given the opportunity to be vaccinated with Hepatitis A Vaccine, at no charge to myself. However, I decline Hepatitis A vaccination at this time. If, in the future, I want to be vaccinated with Hepatitis A Vaccine, I can receive the vaccination series at no charge to myself.

_____ _____
Employee Signature Date

_____ _____
Supervisor's Signature Date

GENERAL SAFETY RULES

Practical Jokes and Personal Conduct

A. Employees shall not engage in practical jokes or "horseplay". This is considered inappropriate, libelous activity and shall not be tolerated under any circumstances. Disciplinary action may result.

B. Each employee must comply with safety and health standards and all rules, regulations, and orders which are applicable to his or her own actions and conduct. Violations may be considered sufficient grounds for disciplinary action, including discharge.

C. Employees shall perform their work in a safe and alert manner and be aware of the possibility of unseen danger or situations. Employees are not expected to sacrifice their own or others safety to perform their duties.

D. An employee shall avoid distracting the attention of another worker from his or her job until it is determined that no danger will result.

E. A fellow employee should be cautiously warned, when seen in a dangerous situation, to avoid confusing, startling, or alarming them.

F. Employees shall not use compressed air or other compressed gases for cleaning their clothing because of the dangers of flying particles and the possibility of forcing air through their pores into their bloodstream.

G. Supervisors shall be responsive to their employees and aware of the job hazards.

H. Modifying, displacing, removing or disconnecting any safety device is prohibited.

I. Do not paint (or cover) over safety instructions.

J. Firearms, ammunition, explosives, and other weapons of any kind are not allowed on the City of Kennett property. Possession, display or use of these items may result in disciplinary action.

Equipment Safety Shields/Guards

A. No shield/guard shall be removed from any machine or piece of equipment except to perform required maintenance.

B. Should a guard/shield be found broken or missing, it is to be reported and then repaired/replaced immediately and/or the equipment must be tagged out of service until the correction is made.

C. Guards removed to perform maintenance operations shall be replaced immediately and the machine shall not be operated while the guards are removed except for maintenance certification.

Housekeeping

A. Good housekeeping shall be maintained in shops, yards, buildings, vehicles, and job sites. Supervisors shall be responsible for proper housekeeping in or around the work they are supervising.

B. Walks, aisles, stairways, fire escapes, and other passageways shall be kept clear of obstructions and tripping hazards. Access to electrical panels, control bulbs, fire extinguishers, etc., shall be kept clear of obstructions.

C. Tools and materials shall not be placed where they may cause tripping or stumbling hazards, or where they may fall and strike anyone.

D. Tools shall be cleaned and returned to their proper place when job is completed.

E. Puddles of oil, paint, water, etc., shall be cleaned up promptly. Absorbent material should be used as a cleanup aid when needed.

F. Nails in boards, such as those removed from sheathing, scaffolds, forms, and packing boxes shall be removed and the boards carefully stacked or stored if they are to be reused. If such boards are to be added to a scrap pile for disposal, nails should be bent over or removed.

G. Scrap containers, or scrap collection areas, shall be provided where needed and used for storage of wood and metal scraps.

H. Scrap material of salvage value shall be properly stored until suitable arrangements are made.

I. Combustible materials, such as oil-soaked rags, waste and shavings shall be kept in approved metal containers with metal lids. Containers shall be emptied as soon as practicable.

J. Dispose of glass separately. Fluorescent tubes need special handling.

K. Eliminate fly and insect attractions if possible, at least provide some control.

L. Used rags shall be kept in metal or metal lined bins having metal covers.

M. Flammable liquids shall be used only for their designed purposes. Gasoline, benzene, naphtha, lacquer thinner, etc., shall not be used for cleaning purposes or for starting or kindling fires.

N. All solvents should be kept in approved, properly labeled containers. Gasoline, benzene, naphtha, lacquer thinner, and other solvents of this class shall be handled and dispensed only in U.L. approved, properly labeled (yellow letters) red safety cans.

O. Permanent floors and platforms shall be kept free of dangerous projections or obstructions and shall be maintained reasonable free from oil grease, or water. Where the type of operation produces slippery conditions, mats, grates, cleats or other methods shall be used to reduce the hazard from slipping.

P. Materials and supplies shall be stored in an orderly manner to prevent their falling or spreading and to eliminate tripping and stumbling hazards.

Q. Paper and other combustible materials shall not be allowed to accumulate, and weeds or other range vegetation shall not be permitted to grow in or around the neighborhood of substations, pole yards, buildings, tanks or other structures.

R. In any building, except one provided for their storage, flammable liquids such as gasoline, benzene, naphtha, lacquer thinner, etc. shall be limited to five gallons, in U.L. approved, properly labeled containers.

S. Rule 112-s does not apply to kerosene and cleaning agents of the "Stoddard" solvent class; however, not more than one gallon of such liquids shall be kept in any open container. The container shall be provided with a proper cover and be kept securely covered except when in actual use.

T. When pouring or pumping gasoline or other flammable liquids from one container to another, metallic contact shall be maintained between the pouring and receiving containers. Transferring of flammable liquids from one container to another shall be accomplished only in properly ventilated spaces free from ignition sources.

U. Strict adherence shall be paid to "No Smoking" and "Stop Your Motor" signs at fuel dispensing locations.

Smoking

Smoking or open flames shall not be permitted in areas where dangerous gases might be present, for example, oxygen buildings, acetylene storage, or similar areas. Neither shall smoking be permitted in storerooms, battery rooms, flammable liquid storage and use locations, or in other areas where quantities of combustible materials are kept. Absence of "No Smoking" signs shall not excuse smoking in dangerous places. Smoking is not allowed in the service center, water treatment plant, wastewater treatment buildings or any building.

Fire Protection

A. Good housekeeping is one of the most effective aids to fire prevention. Wastepaper, rags and other combustible materials shall not be allowed to accumulate.

B. Matches, cigars, cigarettes, pipe tobacco, and ashes shall be disposed of in ashtrays or other non-combustible containers. Ashtrays shall be emptied into metal trash containers. Smoking debris shall not be emptied into wastepaper baskets.

C. The growth of weeds, tall grass, or other vegetation shall be controlled in or around structures, yards, buildings, tanks, or storage areas. A regular procedure shall be provided for the periodic cleanup of these areas.

D. Grease and rubbish shall not be allowed to accumulate in elevator shafts and pits.

E. When temporary, combustion-type heating devices, such as salamanders or LP heaters are used:

    1. Adequate fresh air shall be available. Where fresh air is inadequate, mechanical ventilation shall be provided.

    2. They shall not be set directly upon wooden floors or other combustible material unless the heater is specifically designed for that purpose.

    3. They shall be located at least 10 feet from the vicinity of combustible material such as tarpaulins, canvas, plastic film coverings, etc.

    4. They shall be set horizontally level, unless otherwise permitted by the manufacturer's markings, and shall be securely placed to prevent overturning and the spillage of fuel.

F. Firefighting equipment shall not be used, tampered with or removed from designated locations for purposes other than firefighting or rescue operations.

G. Fire doors shall be properly identified and maintained in good operating condition and checked periodically. Materials or equipment shall not be placed to obstruct the fire doors.

H. Flame or excessive heat shall not be used near fire-detecting devices or automatic sprinkler heads in service. Proper clearance shall be maintained between the top level of equipment or stored material and sprinkler heads or fire detectors.

I. Defective or inadequate electric wiring shall be immediately repaired, removed or replaced. Oversize fuses or oversize circuit breakers shall not be used. Fuse and circuit breaker boxes shall be kept closed except during maintenance or testing.

J. Employees shall not smoke nor use matches or open flames (and prevent electric sparks) in areas where combustible gases may exist, until tests prove that combustible gases are not present. Such conditions may exist in confined spaces such as gas-filled electrical equipment, or in manholes, vaults, battery rooms, or transformer or oil circuit breaker tanks.

K. Flammable liquids, such as gasoline, benzene, naphtha, and lacquer thinner shall be kept in approved safety cans identified by proper markings. The quantity shall be kept to a minimum except in approved areas. Flammable liquids shall be kept in closed containers when not actually in use. Where more than five (5) gallons of flammable or combustible liquids or five (5) pounds of flammable gas are being used, a fire extinguisher with a U.L. rating of not less than 10-B shall be provided within 50 feet.

L. Flammable liquids such as gasoline, benzene, naphtha, and lacquer thinner shall not be used for cleaning purposes.

M. When pouring or pumping flammable liquids from one container to another, metallic contact shall be maintained, or an electrical bonding jumper connected between the containers to minimize the possibility of static spark ignition.

N. Plant spray booths shall be used properly ventilated and adequate firefighting equipment shall be provided. "No smoking" signs shall be conspicuously posted.

O. Proper precautions shall be used in the presence of material in the form of dust or powder to prevent an explosion.

P. Employees shall be familiar with the location and proper use of fire extinguishers in their work area. Whenever a fire extinguisher is used, it shall be promptly replaced. The used fire extinguisher shall be recharged as soon as possible.

Q. Except for wheeled type equipment, all fire extinguishers shall be mounted. (Recommended height is 42 inches or less.)

R. All employees shall know the classes of fire, their burning characteristics and the proper extinguishing agent to be used.

(Class "A" fires involve normal combustibles such as wood and paper. Extinguishing agents include water, soda-acid and multipurpose dry chemical.)

(Class "B" fires involve oils and flammable liquids. Extinguishing agents include CO2 and dry chemical.)

(Class "C" fires involve electrical equipment. Extinguishing agents include CO2 and dry chemical.)

(Halon 1301 (Freon) and Halon 1211 are gaseous extinguishing agents suitable for combating both Class "B" and Class "C" fires, especially at indoor locations. Both agents are slightly toxic in low concentrations (less than 5 percent) and will cause unconsciousness in a short period of time when the concentration is above 15 percent. When the extinguishing agent is released, precautionary measures like those for toxic, confined spaces should be employed.)

S. Carbon tetrachloride fire extinguishers shall not be used; carbon tetrachloride is extremely toxic.

T. Employees shall be instructed in the proper use of fire extinguishing equipment and methods of extinguishing fires (including clothing fires).

U. Fire protection equipment shall not be blocked or hidden from view. In large rooms and in certain locations where visual obstruction cannot be completely avoided, signs shall be conspicuously posted to show the location of such equipment. Never use extinguisher as a coat rack.

V. Extinguishers shall be inspected monthly, or at more frequent intervals when circumstances require, to ensure that they have not been actuated or tampered with, and to detect any obvious physical damage, corrosion, or other impairments.

W. Extinguishers shall have a durable tag securely attached to show the monthly maintenance date and the initials or signature of the person who performed this service.

X. Electric shock is possible if the person using C02 fire extinguishers on an electrical fire does not maintain a safe distance from the fire.

Y. The discharge horn of a C02 fire extinguisher becomes very cold during use. Do not touch it.

Z. When a C02 extinguisher is used in an unventilated space, the user can become unconscious because of oxygen deficiency. Employees shall not enter confined spaces after using CO2 extinguishers until the area has been thoroughly ventilated.

AA. Although dry chemical fire extinguishers are safe for the employee when used on electrical fires, if the powder becomes wet, a conducting solution is formed which could cause damage to electrical insulation.

BB. Multi-purpose dry chemicals for Class A, B, and C fires shall not be mixed with dry chemicals intended for use on Class B and C fires only.

CC. Ordinary Combustibles - Fires in paper, wood, drapes, and upholstery require an extinguisher labeled A.

DD. Flammable Liquids - Fires in fuel, oil, gasoline, paint, grease in a frying pan, solvents, and other flammable liquids require an extinguisher labeled B.

EE. Electrical Equipment - Fires started in wiring, overheated fuse boxes, conductors, and other electrical sources require an extinguisher labeled C.

FF. Metals - Certain metals such as magnesium and sodium require an extinguisher labeled D.

GG. The purpose of fire protection systems is to protect life and property by automatically or manually suppressing fire. If not properly maintained, these systems may become worthless.

HH. Keep only small quantities of flammables and combustibles on hand. Separate flammables and materials that react with each other.

II. Store flammables only in approved, correctly labeled, properly located and ventilated storage areas.

JJ. Post the location of the nearest fire alarm station, the proper fire reporting procedure, and the correct method of using all fire extinguishers in your work area.

KK. Do not use soda-acid extinguishers on electrical fires.

LL. Explosion proof motors, switches and lights are required in areas where explosive gases might be found.

MM. Conduct drills and allow practice with each type of extinguisher. Install smoke detectors in personnel areas and check frequently (at least monthly).

NN. Hydrostatic test interval varies with contents and type. Example: Dry chemical with stainless steel shell must be tested every 5 years while a dry chemical with mild steel shell allows a 12-year test interval.

Hand Tools

A. All tools, regardless of ownership, shall be of an approved type and maintained in good condition. (Tools are subject to inspection at any time. A foreman has the authority and responsibility to condemn unserviceable tools, regardless of ownership.)

B. Defective tools shall be tagged to prevent their use, or they shall be removed from the job site.

C. Employees shall always use the proper tool for the job performed. Makeshift and substitute tools shall only be used with proper authorization and under supervision.

D. Hammers with metal handles, screwdrivers or knives with metal continuing through the handle and metallic measuring tapes shall not be used on or near energized electrical circuits or equipment.

E. Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.

F. Tools shall never be placed unsecured on elevated places.

G. As impact tools such as chisels, punches, drift pins, etc. become mushroomed or cracked, they shall be dressed, repaired or replaced before further use.

H. Chisels, drills, punches, ground rods and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.

I. Shims shall not be used to make a wrench fit.

J. Wrenches with sprung or damaged jaws shall not be used.

K. Pipe shall not be used to extend a wrench handle for added leverage unless the wrench was designed for such use.

L. Tools shall be used only for the purposes for which they have been approved.

M. Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets.

N. Wooden handles that are loose, cracked or splintered shall be replaced. The handle shall not be taped or lashed with wire.

O. All cutting tools such as saws, wood chisels, drawknives, or axes, shall be kept in suitable guards or in special compartments.

P. Tools shall not be left lying around where they may cause a person to trip or stumble.

Q. When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded.

R. The insulation on hand tools shall not be depended upon to protect users from shock.

Portable Electric Tools

A. The non-current carrying metal parts of portable electric tools such as drills, saws and grinders shall be effectively grounded when connected to a power source unless:

1. The tool is an approved double-insulated type, or

2. The tool is connected to the power supply by means of an isolating transformer or other isolated power supply, such as a 24V DC system.

B. All powered tools shall be examined prior to use to insure general serviceability and the presence of all applicable safety devices. The electric cord and electric components shall be given an especially thorough examination.

C. Powered tools shall be used only within their capability and shall be operated in accordance with the instruction of the manufacturer.

D. All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.

E. Electrical tools shall not be used where there is a hazard of flammable vapors, gases, or dusts.

F. Tools connected to a central power supply (not isolated) and are not double insulated, shall be protected by a Ground Fault Interrupter (GFI) or by an "assured grounding system."

Pneumatic Tools

A. Compressed air and compressed air tools shall be used with caution.

B. Pneumatic tools shall never be pointed at another person.

C. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

D. Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

E. Compressed air shall not be used for cleaning purposes except where reduced to less than 30 p.s.i. and then only with effective chip guarding and personal protective equipment.

F. Compressed air shall not be used to blow dust or dirt from clothing.

G. The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.

H. The use of hoses for hoisting or lowering tools shall not be permitted.

I. All hoses exceeding 1/2 inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure or disengagement of a connection.

J. Before adjusting or changing air-tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

K. Eye protection, foot protection and other protective devices shall be worn when their use could reduce the possibility of injury.

L. Pneumatic tools shall be operated only by competent persons who have been trained in their use.

M. The use of metal-reinforced hose shall be avoided near energized equipment. When this type of hose must be used, proper clearances shall be maintained.

N. Jackhammer:

1. Receive appropriate training:

    a. Read the operator’s instruction manual before using the jackhammer.
    b. The Department Supervisor must certify, by documentation, that appropriate training has been provided.

2. Always fill the compressor engine fuel tank out of doors with engine shut off and cool. Never handle fuel while smoking or in the presence of sparks or open flame. Allow the engine to cool briefly if you need to refuel during operation.

3. Always wear protective equipment. Eye protection (safety glasses or shield), safety helmet, hearing protection, sturdy long pants, and foot protection are essential. Breathing protection may be used at the operator’s discretion.

4. Check all bits to see that they are sharp. If not, sharpen according to the manufacturer’s recommendations.

5. Always disconnect air supply before inserting or removing tools.

6. Be sure all tools are properly locked into the unit before operating.

7. Keep all bystanders, children, and pets out of the work area.

8. Prevent back injuries by using your leg muscles to lift the machine into operating position.

9. Allow the tool to do the work by using a grip light enough to maintain control.

10. Take rest breaks as needed.

11. If stopping work for a short period of time, or for the day, stop the compressor.

Power Lawn Mowers, Edger's, Etc.

A. Employees shall insure that all applicable guards are in place prior to using power lawn mowers.

B. All power lawn mowers shall be equipped with adequate guards, which shall remain in place while mower is in use.

C. Prior to making adjustment, inspections or repairs, the employee shall turn off the mower and permit it to come to a complete stop.

D. When operating a power mower, the operator shall:

1. Remove any rocks, pieces of wire or other foreign objects from the area to be mowed.

2. Avoid placing the body in front of the discharge opening.

3. When mowing a slope or incline, mow across the face of the slope.

4. Wear proper protective equipment to include as a minimum safety glasses or safety goggles. (Safety footwear should be worn.)

Safe Supports and Scaffolds

A. No employee, or any material or equipment, shall be supported or permitted to by supported on any portion of a tree, pole structure, scaffold, ladder, walkway, or other elevated structure, crane or derrick, etc., without it first being determined that such support is adequately strong and properly secured in place.

B. Employees shall check all scaffolding prior to use to insure it is of enough strength and rigidity to safely support the weight of persons and material to which it will be subjected.

C. Employees shall not use a scaffold from 4 to 10 feet in height having a minimum horizontal dimension of less than 45 inches unless proper guardrails are present to provide employee protection.

D. Employees shall not use a scaffold over 10 feet in height unless there is present a standard guardrail, with midrail and toe board, to provide adequate employee protection.

E. Scaffold planks shall extend over their end supports by not less than 6 inches (unless cleated) nor more than 12 inches.

F. Scaffolds shall not be moved without first removing all loose tools, materials and equipment resting on the scaffold deck.

G. All scaffolds shall rest on a suitable footing and shall stand level. Movable scaffolds shall have the casters or wheels locked to prevent movement.

Ladders-General

A. Wooden ladders shall not be painted to obscure a defect in the wood; only a clear, non-conductive finish shall be used.

B. All ladders shall be inspected frequently and regularly. Ladders with weakened, broken or missing steps, broken side rails, or other defects shall be tagged and removed from service.

C. Ladders and scaffolds shall be sufficiently strong for their intended use.

D. Portable metal ladders shall not be used in the vicinity of energized electrical circuits. (Exception: Such ladders may be used in specialized work, as high voltage substations, where non-conductive ladders might present a greater hazard. These ladders shall be properly marked.)

E. Ladders shall not be placed in front of doors opening toward the ladder unless the door is open, locked or guarded.

F. When ascending or descending ladders, employees shall have both hands free and shall face the ladder.

G. Only one employee shall work from a ladder at one time (except for hook-type ladders). If two employees are required, a second ladder shall be used.

H. Employees shall use only company-owned ladders.

I. Ladders shall not be used as scaffold platforms.

J. Boxes, chairs, etc. shall not be used as ladders.

Straight Ladders

A. Portable straight ladders shall not be used without non-skid bases.

B. The ladder shall be placed so that the distance between the bottom of the ladder and the supporting point is approximately one-fourth of the ladder length between supports.

C. Straight ladders shall not be climbed beyond the third step from the top.

D. When working from a portable ladder, the ladder must be securely placed, held, tied, or otherwise made secure to prevent slipping or falling.

E. When dismounting from a ladder at an elevated position (as at a roof) the employee shall insure that the ladder side rails extend at least 3 feet above the dismount position, or that grab bars are present.

F. Employees shall belt off to a ladder whenever both hands must be used for the job or there exists a possibility of the employee falling from an elevated position.

G. Ladders shall not be spliced together to form a longer ladder.

H. A ladder shall not be placed against an unsafe support.

Step Ladders

A. The top step shall not be used, except for platform ladders.

B. Stepladder legs shall be fully spread, and the spreading bars locked in place.

C. Stepladders shall not be used as straight ladders.

D. When an employee is working on a step ladder over 10 feet high (except a platform ladder), the ladder shall be held by another person.

Material Handling - Lifting and Carrying

A. Test the weight and handling carefully prior to attempting the lift.

B. Consider the size, weight, and shape of the object to be carried. Do not lift more than can be handled comfortably. If necessary, get help.

C. Set feet solidly, one foot can be slightly ahead of the other for increased effectiveness. Feet should be far enough apart to give good balance and stability (approximately the width of the shoulders).

D. Get as close to the load as practicable. Bend legs about 90 degrees at the knees.

E. Crouch do not squat. It takes about twice as much effort to get up from a squat.

F. Bend knees. Keep the back as straight as practicable. It may be far from being vertical, but it should not be arched. Bend at the hips, not from the middle of the back.

G. Grip the object firmly. Maintain the grip while lifting and carrying. Before changing or adjusting this grip, set the object down again.

H. Straighten the legs to lift the object, and at the same time bring the back to a vertical position. A good tip is to look up at the sky or ceiling when beginning the lift.

I. Never carry a load that you cannot see over or around. Make sure the path of travel is clear. Carry the object close to the body.

J. Never turn at the waist to change direction or to put an object down. Turn the whole body and crouch down to lower the object. Grip the object firmly, keep it close, and keep the back straight (not arched). To keep hands from being pinched against the floor, put one corner of a box or similar object down first, so that the fingers can be removed from under the sides.

K. When lifting an object with another person, employees shall be sure that they both lift at the same time and let the load down together. One person should give the signals or orders.

L. Improper lifting methods require unnecessary effort and often lead to injury. Ask for help when it is necessary to lift any object that is difficult to handle due to its weight, shape, or size.

M. When carrying long objects each person shall be on the same side of the load.

N. When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried.

<u>Compressed Gases</u>

A. Care shall be exercised in handling all compressed gas cylinders. They shall not be dropped, jarred or exposed to temperature extremes.

B. Cylinders shall always have the valve cap or valve protection device in place, except when in actual use of connected to a welding set.

C. Cylinders shall not be rolled and shall not be lifted by the valve or valve cap; a suitable cradle or other device shall be used.

D. Cylinders shall have their contents properly identified.

E. Compressed gas cylinders, whether full or empty, shall be stored in an upright position and chained or otherwise secured so they cannot fall or be upset.

F. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum of 20 feet or by a 5-foot high non-combustible barrier.

G. Cylinders shall not be placed where they might become part of an electric circuit or within five feet of an electrical outlet.

H. Hydrogen and fuel gas cylinders shall not be stored inside any operating building. Separate storage buildings or sheltered storage areas shall be used.

I. Employees shall never force connections, which do not fit, nor shall they tamper with the safety relief devices of cylinder valves.

J. Before the regulator is removed from a cylinder, the valve shall be closed, and all pressure released from the regulator.

K. A leaking cylinder shall not be use. Such cylinders shall be taken outdoors away from sources of ignition. The supervisor shall be notified.

L. A flame shall never be used to detect gas leaks.

M. The recessed top of cylinders shall not be used as a place for tools.

N. No attempt shall be made to mix gases in a cylinder or to transfer gas from one cylinder to another.

O. A sign "Danger-No Smoking, Matches or Open Lights" or equivalent wording shall be conspicuously posted in rooms or at entrances to areas where fuel gas is used or stored.

P. Hydrogen. Special precautions shall be taken when using hydrogen to avoid the possibility of fire and explosion. "Danger-No Smoking" signs shall be posted where hydrogen is used or stored.

Q. Oxygen. Oil grease or similar materials shall not be allowed to meet any valve, fitting, regulator or gauge of oxygen cylinders.

R. Acetylene. Acetylene cylinders shall be properly secured and always be used, transported, or stored in a vertical position. Cylinders shall be protected from sparks, flames, and contact with energized electrical equipment.

S. Chlorine

1. Chlorine containers shall be stored and properly secured in a cool place protected from moisture.

2. Every precaution shall be taken to prevent accidental discharge of the gas, and protective equipment shall be readily available for use in an emergency.

3. Chlorine cylinders shall never be used or stored near flammable materials.

4. Should a chlorine leak develop, the cylinder shall be placed so that only "gas" escapes. (An ammonia swab may be used to detect leaks.) Water should not be sprayed or poured on chlorine leaks.

5. Dry chlorine shall be stored in an isolated area as mixing it with anything, but water could cause a fire or explosion.

Gas Welding and Cutting

A. Only experienced and properly trained persons shall perform welding and cutting. Before welding or cutting is started, the area shall be inspected for potential fire hazards.

B. When welding or cutting in elevated positions, precautions shall be taken to prevent sparks or hot metal from falling onto people or flammable material below.

C. Suitable fire extinguishing equipment shall be immediately available at all locations where welding and cutting equipment is used. Any employee using cutting torch equipment shall make sure tanks are turned off before leaving area.

D. Welders or their helper when engaged in welding or cutting operations shall not carry matches or lighters.

E. Matches or lighters shall not be used to light a torch; a torch shall not be lighted on hot work. A friction lighter or stationary pilot light shall be used.

F. A fire watch shall be maintained wherever welding or cutting is performed in locations where combustible present a fire hazard. A fire check shall be made of the area one half hour after completion of welding.

G. Where combustible materials such as paper clippings or wood shavings are present, the floor shall be swept clean for a radius of 35 feet before welding. Combustible floors shall be kept wet or protected by fire-resistant shields. Where floors have been wet down, personnel operating arc-welding or cutting equipment shall be protected from possible shock.

H. Approved back flow check valves shall be used on gas welding rigs in both gas and oxygen lines.

I. Welding hose shall not be repaired with tape.

J. Machinery, tanks, equipment, shafts, or pipes that could contain explosive or highly flammable materials shall be thoroughly cleaned and decontaminated prior to the application of heat.

K. In dusty or gaseous spaces where there is a possibility of an explosion, welding or cutting equipment shall not be used until the space is adequately ventilated.

L. Adequate ventilation or approved respiratory equipment shall be used while welding in confined spaces or while brazing, cutting or welding zinc, brass, bronze, stainless steel, or galvanized or lead coated material.

M. Cadmium bearing materials.

1. Proper respiratory protection must be used when welding or cutting cadmium bearing metals.

2. Indoors or in confined spaces, local exhaust ventilation or airline respirators shall be used.

3. Outdoors, respiratory protection such as approved fume respirators or airline respirators shall be used.

Electric Welding

A. Only authorized persons who are experienced and properly instructed shall operate electric welding equipment.

B. The electric welding machine shall be properly grounded prior to use.

C. Suitable fire extinguishing equipment shall be readily available in the work area.

D. Rules and instructions supplied by the manufacturer or affixed to the machine shall be followed.

E. To protect his eyes, face and body during electrical welding and cutting the operator shall wear an approved helmet, proper protective gloves and clothing. Helpers or attendants shall wear proper eye protection. Other employees shall not observe electric welding operations unless they use approved eye protection.

F. Proper eye protection shall be worn to guard against flying particles when the helmet is raised.

G. Welding screens shall be used whenever other persons could be exposed to the arc of the welding operation. Welders shall not strike an arc with an electrode, whenever there are persons nearby who might be affected by the arc.

H. When electrode holders are to be left unattended, the electrodes shall be removed, and the holders shall be placed or protected so that they cannot make electrical contact with employees or conducting objects.

I. When the welder must leave his work or stop work for any appreciable length of time, or when the welding machine is to be moved, the power switch or breaker to the equipment shall be shut off.

Electrical Protection

A. Avoid working "Hot" circuits anytime.

B. Only authorized personnel may perform maintenance or repairs on electrical equipment.

C. Disconnect, lockout, and verify power stopped to any equipment before performing any repairs.

D. Treat all wires as live. Report all loose or exposed wires to your supervisor.

E. Electrical equipment grounding wires must not be broken or disconnected.

F. Use a Ground Fault Circuit Interrupter (GFCI) where the grounding system cannot be relied upon.

G. Extension and power cord must not have any breaks in insulation, plugs, or sockets.

H. Obey all high voltage signs and keep the proper distance.

I. Report any spills or leaks of transformer oil to your supervisor.

J. Electric shock frequently causes serious injury, especially where the hazard of a ground and moisture are present. Do not attempt to repair electrical equipment unless you know for certain what you are doing and are authorized to do this type of work.

K. Safety locks and tags must be placed on all electrical circuits or equipment whenever it is out of service for repair. Tags must indicate date of lock out and signature of person responsible for lock out. In some cases, electrical equipment should be kept locked to all but qualified and authorized electrical workers. No excavation should be attempted in public right of ways without checking with proper agencies and location maps of all underground utilities.

L. Personal protective equipment shall be worn, (i.e. ANSI approved hard hats, hard toed footwear, rubber gloves, etc.).

M. When necessary to work (hot) energized circuits for testing, all safety precautions shall be taken.

N. Approved gloves and hot sticks shall be used while working on 2300, or more, volt equipment, even though de-energized and grounded.

O. Metal ladders are prohibited while working on electrical equipment.

P. Electricians will not be allowed to work alone in isolated areas.

Q. All circuits will be de-energized prior to performance of work.

R. All extension cords will be periodically checked for insulation damage.

S. Removal of tags and locks by anyone other than the employees placing the tags and locks on a piece of equipment will be subject to immediate dismissal, as serious injury could be caused to maintenance personnel working on tagged equipment.

T. Switchboards/panels are not to be used as coat racks.

U. Under certain conditions point three (.3) amperes can be fatal. Use caution even under low voltage currents.

V. Automatic starting motors and pumps must carry a warning sign.

W. Avoid "Christmas Trees" arrangements of double sockets, plugs, cords, etc.

Painting

A. Employees using paints, lacquers, thinners, or solvents should avoid inhaling the vapors or getting these materials into their mouths and should wash their hands carefully before eating.

B. Employees wearing clothing contaminated with paint or thinner shall not use or go near open flames.

C. Spraying areas in which dangerous quantities of flammable vapors, mists, combustible residues, dusts, or deposits are present shall be provided with adequate mechanical ventilation, which exhausts to a safe location. This ventilation shall be kept in operation while spraying operations are being conducted and for an enough time thereafter to allow vapors to be exhausted.

D. Smoking, welding, open flames, or sparks shall not be permitted in areas where employees are spraying with a combustible or flammable material.

E. "NO SMOKING" signs shall be conspicuously posted in spraying areas and on paint storage rooms.

F. Approved portable safety lamps shall be used in paint spraying areas in which dangerous quantities of flammable vapors, mists, combustible residues, dusts, or deposits are present during spraying operations.

G. Fire protection sprinklers for paint spray booths or spraying areas should be kept as free from deposits as practicable by cleaning daily, if necessary, or by covering the sprinkler head with a very light weight plastic bag that would not interfere with the proper operation of the sprinkler.

H. Suitable portable fire extinguishers shall be installed near paint spraying areas.

I. Employees using spray-painting equipment shall wear an approved mask or respirator and eye protective equipment.

FLEET SAFETY

GENERAL SAFETY RULES

A. Only those employees specifically authorized and who possess a valid license or permit for the equipment being used shall operate company-owned motor vehicles or personally owned vehicles on company business.

B. Drivers shall know and obey all state and local motor vehicle laws applicable to the operation of their vehicle.

C. The driver shall drive at safe speeds no greater than that permitted by law. Traffic, road, and weather conditions shall be given consideration in determining the safe speed within the legal limit at which the vehicle shall be operated.

D. Maintain a safe distance from other vehicles. On dry pavement, under good driving conditions use the two (2) second rule for spacing. Pick out a point in the road that is clearly visible, like a shadow, bridge or road signpost. When the vehicle is front passes that mark, begin to count "one thousand and one, one thousand and two." If your vehicle passes the mark before you count one thousand and two you are following too closely. Slow down!

E. A driver shall not permit unauthorized persons to drive, operate, ride in, or on, a company vehicle.

F. Seat belts are always to be worn in City of Kennett vehicles that provide seat belts. Should seatbelts not be provided, Per Missouri law the following exceptions apply:

   1. Vehicles with a gross weight of 6 or more tons.

   2. Vehicles manufactured prior to January 1, 1968.

G. Employees shall not be permitted to ride or be placed on any part of a moving vehicle that is not designed for safe human transport or part of a work procedure.

H. Employees shall not ride on trailers.

I. Employees shall not jump on or off vehicles in motion.

J. Make sure you are in a comfortable driving position and that you can reach all controls.

K. Adjust mirrors, both the inside and on the outside. When you look at the outside mirror you should be able to see the rear fender.

L. While operating any vehicle, refrain from cellular telephone use altogether, use hands-free equipment that allows both hands to stay on the wheel, or pull over to the side of the road before making or accepting a call.

M. Never attempt to take notes, read work orders, or otherwise divert your attention while driving. All conversations should be suspended during heavy vehicular or pedestrian traffic, severe weather, or any other condition, which may compromise concentration and safety.

Inspection of Equipment

A. The driver shall determine that brakes are in a safe operating condition before operating equipment. If brakes are not working properly, they must be corrected before vehicle is used.

B. The driver shall inspect windshield wipers frequently and see that they are in good operating condition and that the windows and windshield give enough visibility for safe operation of vehicle.

C. All lights and reflectors of vehicle shall be inspected by the driver doing any night driving, and if found defective, they shall be repaired immediately.

D. Check proper operation of all other equipment, including handbrake - emergency brake, turn signals, horn, tires, steering, etc.

E. Check all fluid levels prior to driving vehicle.

F. The driver shall report any defects, which may have developed during the day. If the brakes are not working properly, they shall be adjusted or repaired before the vehicle is put in operation. Other items, which affect safety, shall be repaired prior to continued vehicle operation.

G. The driver shall be responsible for ensuring that trash or debris will not escape the vehicle while in motion.

Exhaust Gas

The driver shall not operate the motor in any garage except when driving in or out, and then the motor shall be operated as little as practicable. The motor shall not be warmed up inside a garage nor shall the driver test motor operation in a garage unless the exhaust gas is carried directly to outside atmosphere, or doors and windows are open so that adequate ventilation exists.

Operation

A. The operator of a motor vehicle shall clearly signal his intention of turning, passing or stopping.

B. Upon a signal from a vehicle approaching from the rear, the driver of a company vehicle shall yield the right of way.

C. Drivers shall be prepared to stop, and the right of way shall be yielded in all instances where necessary to avoid an accident.

D. The driver of a vehicle shall be courteous toward other operators and pedestrians. He shall operate his vehicle in a safe manner and shall yield the right of way to pedestrians and other vehicles when failure to do so might endanger any person or another vehicle.

E. The driver shall stay an enough distance behind when following another vehicle so that he can safely stop the vehicle in the clear distance ahead.

F. Drivers shall exercise added caution when driving through residential and school zones.

G. When entering or leaving any building, enclosure, alley or street where vision is obstructed, a complete stop shall be made, and the driver shall proceed with caution.

H. Trucks on which derricks or booms are erected above traveling height shall not be moved except under the immediate direction of a designated employee, who shall give his undivided attention to the movement.

I. Before a radio equipped vehicle is driven under or adjacent to energized equipment, especially in substation areas, the radio antenna shall be lowered, and clearance checked in order to ensure that proper clearances will be maintained between the vehicle and energized equipment.

J. All ignition systems shall be turned off and no smoking permitted while refueling.

K. When proceeding down a grade, the clutch shall not be disengaged. Trucks, particularly if heavily loaded, shall be in a lower gear on steep grades.

L. Per Missouri law, headlights will be turned on during any period of inclement weather, when fog is present, or when the windshield wipers are used.

Parking

A. When vehicles must be parked on the roadway, they shall be parked on the right-hand side facing in the direction of traffic flow, whenever possible.

B. When parking on a roadway, vehicles shall park off the traveled road surface, whenever possible. When vehicles must park closer than 10 feet to the traveled road surface, appropriate warning devices shall be used.

C. Proper warning lights, reflectors or red flags in accordance with state or local requirements shall protect trucks or trailers stopped on any public roadway.

D. Vehicles shall not be parked on bridges or over culverts except when necessary for work.

E. Wheel chocks will be used on large vehicles whenever parked as an added protection along with the vehicle's emergency brake system.

F. When it is necessary to park on an incline, the driver shall make sure the vehicle is left in a safe position. The engine shall be turned off, the vehicle placed in the lowest gear, or "park" position, and the parking brake set. The front wheels shall be cut into the curb, or if a curb is not present, the rear wheels shall be chocked.

Backing

A. Whenever possible, the vehicle shall be positioned to avoid the necessity of backing later.

B. Extreme caution shall be exercised when backing a vehicle, to avoid injury to persons and to prevent property damage. If another employee is present, he shall be stationed at the rear of the vehicle to assist the driver in backing the vehicle safely. Turn your head and look back, don't just look in the rear-view mirror. Never back fast or far or into an intersection.

C. When backing a vehicle which has an obstructed view to the rear:

1. A reverse signal (back-up alarm) audible above the surrounding noise level shall be used, or

2. An observer shall signal that it is safe to back.

3. Back slowly.

4. Watch both sides but do not depend entirely on mirrors.

5. In any difficult backing situation, enlist the help of another person on the ground as a guide, when such help is available.

Stopping on Highway

A. Stopping on the highway shall be avoided.

B. When it is necessary to stop on the highway, extreme caution shall be used. Warning signals and lights shall be used.

   1. Rotating beacon shall be used, if vehicle is so equipped.

   2. Taillights/emergency flashers shall be used.

   3. Flares or reflectors shall be placed to give adequate advance warning.

   4. If work is in progress, traffic control devices (together with flagmen, where necessary) shall be used. (See Section 501 - Work Zone Barricading)

Refueling Motor Vehicles

A. Stop the engine before fueling.

B. Avoid static sparks by inserting the hose nozzle firmly in the tank; making sure that metallic contact is made. Keep a hand on the nozzle throughout the entire delivery to prevent overflow.

C. Maintain tight connections on the hose and nozzle to eliminate all leaks.

D. Do not permit the tank to overflow.

E. Drain the hose before removing the nozzle.

F. Hang the nozzle securely and see that the cap is placed tightly on the tank.

G. Change clothing immediately if it is saturated with gasoline to prevent possible burns or injury to the skin.

H. Use only high flashpoint solvent for cleaning purposes.

I. Prohibit smoking in the area when delivering or receiving gasoline.

DRIVER SELECTION

The selection of employees who will be required to drive full or part-time will be done with care. Drivers of City vehicles can be considered qualified when they meet the following criteria:

1. Possess a valid Missouri Driver's License of the proper class.

2. At the supervisor's discretion, be capable of passing an eye exam to determine depth perception, visual acuity, vertical and lateral balance, field of vision, and color recognition.

3. Successfully passes a road test administered by a supervisor.

DRIVER TRAINING

All City drivers will be trained on safe driving habits using a driving course offered by the Department they are assigned to. The course will be given to each driver at least once every three years. The course will include:

1. Defensive driving skills.

2. Split-second decision making.

3. Backing-up rules.

4. Safe distances.

5. Intersection driving.

6. Poor condition driving on snow, rain, ice, etc.

PREVENTIVE MAINTENANCE

The preventive maintenance program for City vehicles is essential. The maintenance program will include the checking of vehicles daily and monitoring to assure proper maintenance. Repairs shall be made on noted defects.

WORK ZONE BARRICADING/CONSTRUCTION PROCEDURES

Work Zone Barricading

A. Work area protection is the adequate safeguarding or protecting of pedestrians, motorists, utility workmen and equipment by the use of adequate barriers, warning signs, lights, flags, traffic cones, high-level standards, barricade rope, flagmen, etc., on approaches to work areas, excavations, open manholes, parked equipment, etc.

B. The use of these devices must be coupled with proper planning, design, installation, inspection, maintenance and the use of good common sense. It is of the utmost importance that the work area be properly identified and that warning devices say what they mean, to convey the message to the public well in advance of arrival at the work area.

C. The public must be warned, then regulated and guided safely through or around the work area. Proper barricading shall be planned to ensure the safety and protection of the public, the workmen, and the equipment.

D. Responsibilities:

1. All Supervisors shall ensure that only those signs, standards, barricades, flags, and cones, which conform to state or local codes, are used.

2. The Foreman shall be responsible for analyzing hazard potentials and stipulating the appropriate Work Zone Barricading to be accomplished prior to the commencement of work at any affected work site.

3. The Employees are responsible for ensuring that the Work Zone Barricade is properly maintained during their work and for removing the warning devices and equipment as soon as the hazard is eliminated.

E. The minimum requirement for barricading a job site consists of:

1. When possible, a vehicle parked between job site and traffic flow, with emergency brake set.

2. Vehicle lights flashing.

3. A warning sign pole flag or flag placed in front of traffic flow. (A minimum of 100' from maintenance area.)

4. Cones and/or barricades used to channel traffic safely around a job site. (Maximum spacing 25' between cones.)

5. At night, reflective barricades shall be used in place of flags.

6. Many times, a flagman or policeman is needed to direct traffic.

7. At every job site, the job foreman or leadman is responsible for barricading and the appropriate placement of flagman or policeman (as required).

F. General:

1. All state and local traffic codes shall be followed when providing Work Zone Barricading.

2. During night operations or in periods of reduced visibility special precautions shall be taken. Adequate warning equipment, which may include flashing light, flares or area illumination, shall be used.

3. All Electric, Maintenance, Water and Sewer Department employees working within any private roadway, or within any public road right-of-way limits, shall be provided with and shall wear warning vests marked with or made of reflectorized, high visibility material. Excluded from this policy are workers that are elevated in lifting devices. These safety vests are available and can be obtained through the Department Supervisor.

4. Flagmen or other appropriate traffic controls shall be used wherever there is any doubt that effective protection can be provided by signs, signals and barricades.

5. Flagmen using hand-signaling equipment shall insure signals provide enough warning to protect themselves and the work site.

6. Should signal flags be used, they shall be red and at least 24" square.

7. Sign paddles (Stop and Slow) shall be on a minimum 6' staff.

8. In periods of darkness or reduced visibility, flashing yellow lights shall be used.

9. Flagmen shall ensure they can fully observe the operation and shall guide vehicular traffic in such a manner as to minimize the possibility of accidents or injury.

10. When flagmen are used at both ends of a job site, reliable communications or prearranged signals shall be used to ensure proper traffic flow.

11. Flagmen shall face traffic when giving signals.

12. Flagmen shall give positive, direct signals, which leave no doubt as to their meaning.

G. See "Manual on Uniform Traffic Control Devices."

H. Motorist Violations of Work Zone Barricades - In the event a driver violates the work zone barricade, the following procedure will be used:

1. Clear identification of violating vehicle and driver shall be reported to HPD. An attempt shall be made to obtain and report the following information as soon as possible after the barricade violation:

    a. Vehicle license number
    b. Description of driver (i.e. male/female, white/black)
    c. Description of vehicle (i.e. make/model/color)
    d. Direction of vehicle travel (i.e. on what street)

2. Complete a City of Kennett “Incident Form” for record describing the work zone violation, and present to the department Supervisor.