City of Council Bluffs

Safety Policies

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- **OBJECTIVE**

Our objective is a safety and health program that will reduce the number of disabling injuries and illnesses to a minimum, not merely in keeping with, but surpassing, the best experience of other cities similar to ours. Our goal is ZERO accidents and injuries, both to our employees and to the general public.

- **PROGRAM OVERVIEW**

Our safety and health program will include:

- Providing mechanical and physical safeguards to the maximum extent that is possible.

- Conducting a program of safety and health inspections to find and rectify unsafe working conditions or practices to control health hazards, and to comply fully with the safety and health standards of every job.

- Providing necessary personal protective equipment and instruction in its use and care.

- Developing and enforcing safety and health rules, requiring that employees cooperate with these rules as a condition of employment.

- Investigating, promptly and thoroughly, every accident to find out its cause and to correct the problem so that it will not occur again.

- Providing a Hazardous Communications Program that informs the employee of the hazardous properties of the chemical they work with, and measures to take to protect themselves from these chemicals.

- Training all employees in good safety and health practices such as: First Aid, Hazardous Materials, Defensive Driving and any other type of training seen fit to promote a safer workplace.

- **PROGRAM AGREEMENTS (Program Responsibility)**

We recognize that responsibilities for safety and health are shared:

- The City of Council Bluffs is responsible, and accepts the responsibility, for leadership of the safety and health program, for its effectiveness and improvement, and for providing the safeguards required to ensure safe conditions.

- Supervisors are responsible for developing the proper attitudes toward safety and health in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the safety and health of all personnel involved.

- Employees are responsible for wholehearted, genuine cooperation with all aspects of the safety and health program including compliance with all rules and regulations and for continuously practicing safety while performing their duties.

- **RESPONSIBILITIES**

A. Department Heads:

All Department Heads have full authority to and total responsibility for, maintaining safe and healthful working conditions within the jurisdiction whether it be in the field, in the shop or in the office. Although personnel exposure to hazards varies widely from department to department, it is expected that an unrelenting effort will be directed toward controlling injuries, collisions and liabilities in each, therefore, all Department Heads shall:

1. Insure that the policies and procedures set forth herein are compiled with by all personnel under their direction.

2. Provide the leadership and positive direction essential in maintaining firm loss prevention policies as a prime consideration in all operations.

3. When necessary, devote a portion of Staff meetings to review or departmental losses (accidents) to discuss plans to bring about more positive loss reduction. This will vary with the frequency and severity of losses and the degree of hazardous operations in each department.

4. Demonstrate a personal concern in departmental losses by interviewing directly or through a responsible representative, each worker and his/her Supervisor who has:

    a. Lost time from an industrial type injury because of negligence.
    b. Been involved in a vehicular collision because of failure to comply with traffic laws.

5. Call upon the Risk Manager for any assistance needed in promoting aggressive and effective loss control.

6. Hold each Division accountable for an explanation of the preventable injuries, collisions and liabilities incurred by his/her employees. An excessive number is an indication that some management policies and practices need re-evaluation.

B. Division Heads:

All Division Heads shall be fully responsible and accountable to their Department Heads for compliance with the provision of the program within his/her division. Each Division Head shall insure that:

1. All hazardous tasks are covered by specific, published work rules to minimize injury and property damage potential.

2. All personnel are briefed and fully understand division work procedures and existing policies that enforce their use.

3. All employees, new and old, are trained and, when necessary, retrained in the accepted way each hazardous job must be accomplished.

4. All employees are instructed and understand the use and need for protective equipment for specific hazardous jobs.

5. Necessary safety equipment and protective devices for each job are available and used properly.

6. Safety suggestions and written comments from employees are encouraged, and those that are feasible are adopted. These ideas with possible general application are forwarded to the Risk Manager for comments and/or implementation.

7. All accidents are thoroughly investigated, recorded and promptly reported.

8. Prompt, corrective action is taken whenever hazards are recognized or unsafe acts are observed.

9. Each Division Head is held accountable for the preventable injuries, collisions and liabilities incurred by his/her employees. The Divisions Head's capability to supervise is measured in one way by the efficiency of his/her operation.

C. Supervisory Personnel and Foremen:

Every supervisor has full responsibility for the safe action of their employees and the safe performance of equipment within his/her operating area, and has full authority to enforce the provisions of this manual to keep losses at an absolute minimum. Each supervisor shall:

1. Assume full responsibility for the safe and healthful working areas for his/her employees.

2. Be accountable for preventable injuries, collisions and liabilities caused by his/her employees.

3. Insure that all management policies herein are fully implemented for maximum efficiency of each job.

4. Take the initiative in recommending correction of deficiencies noted in facilities, work procedures, employee job knowledge or attitudes that directly affect City loss control efforts.

5. Be firm in enforcement of work policies by being impartial in taking disciplinary action against those who fail to conform, and by being prompt to give recognition to those who perform well.

6. Insure that each employee is fully trained for the job he/she is assigned to do, and that he/she is familiar with published division work rules.

7. Cooperate fully with Department Heads, Division Heads, Risk Management or insurance representatives in shutting down operations considered to be an imminent danger to employees or in removing personnel from hazardous jobs when they are not wearing or using prescribed protective equipment.

D. Employees:

As a condition of employment, employees are required to exercise due care in the performance of their work to prevent injuries to themselves and to their fellow workers.

Each employee shall:

1. Report all unsafe conditions to his/her supervisor.

2. Keep work areas clean and orderly at all times.

3. Report all accidents immediately to his/her supervisor.

4. Avoid engaging in horseplay and avoid distracting others.

5. Obey all safety rules and follow published work instructions. If any doubt exists about the safety of a job, the employee shall STOP and get instructions from his/her supervisor before continuing work.

6. Operate only machines and equipment that he/she has been authorized and trained to operate.

7. Use only prescribed equipment for the job and handle it properly.

8. Wear required protective equipment when working in hazardous operation areas. Dress safely and sensibly.

9. Take an active part in the Safety Program.

E. Risk Manager

The Risk Manager shall conduct an aggressive Loss Prevention program. He/She is responsible for the Staff direction and administration of this program, and shall take all actions deemed essential to produce a positive reduction in accidents and their causes. Specifically, the Risk Manager shall:

1. Maintain the loss control program to incorporate the current practices and philosophies adopted by the safety profession as most effective in preventing injuries, occupational diseases, vehicular collisions, liabilities and damage to equipment and material.

2. Consult with all management personnel and employees on loss prevention matters, and provide necessary guidance to assure effective administration of this program.

3. Periodically attend department and division safety meeting to promote maximum understanding of the program objectives.

4. Evaluate compliance with the program within departments and divisions. Make inspections of facilities for hazardous conditions and housekeeping, and make frequent checks of field and shop areas to insure work compliance with approved safety rules and regulations. The Risk Manager shall recommend to the Department Head and/or Supervisor in charge that a hazardous job be stopped when he/she see that necessary precautions are not being taken. The Risk Manager shall submit a report of any such incident to the respective Department Head advising them of the problem and action taken.

5. Maintain complete records on City accidents and publicize information which will appraise management and personnel of trends which call for corrective measures.

6. Ensure the thorough investigation of accidents resulting in lost time, hospitalization, death or extensive property damage.

7. Provide monthly reports to all Department Heads concerning on the job injuries.

8. Attend Safety Committee Meetings.

BACK SAFETY POLICY – B-02

What causes back problems?

- Poor physical condition. If your back muscles are weak or if you have put on a few pounds, your back must work harder. Making your back work harder can lead to back pain.

- Poor posture. Standing, sitting, or lying incorrectly will put strain on your spine. Your spine is designed to operate best in its natural "S" shape.

- Aging. As we age, the muscles in our backs lose their strength and ability to function.

- Tension and stress. Tight and knotted muscles, which are caused by tension and stress, can cause muscle spasms and back pain.

What can you do to keep your back healthy?

- Exercise to strengthen your back and reduce stress. Having strong back and stomach muscles is important in order to ease the work your back is put through each day.

- Lose excess weight. Excess weight exerts extra force on back and stomach muscles. By losing weight, you can reduce strain and pain in your back

- Maintain good posture. You can prevent many back injuries by learning to sit and stand correctly. The best way to sit straight, with your back against the back of the chair. Keep your feet flat on the floor and your knees slightly higher than your hips. Stand tall with your head up and shoulders back.

- Lift correctly. When you're ready to lift, take these steps:

    1. Stand close to the load with your feet spread about shoulder width apart, with one foot slightly in front of the other for balance.

    2. Squat down, bending at the knees (not your waist). Tuck your chin while keeping your back as vertical as possible.

    3. Get a firm grasp on the object before beginning the lift.

    4. Slowly begin lifting with your legs by straightening them. Never twist your body during this step.

5. Once the lift is complete, keep the object as close to your body as possible. As the load's center of gravity moves away from the body, there's a dramatic increase in stress to the lower back.

6. Know your lifting limits and don't try to exceed it. Ask for help or divide the load, if possible, to make the lift lighter.

7. Set the load down correctly. Squat and let your legs take the weight as you place the object down.

8. Know where to set the item down, make sure your path is clear of obstructions that could cause you to trip and fall.

Keep in mind that preventing a back injury is much easier than repairing one. Because your back is critically important to your ability to walk, sit, stand and work, it's essential to take good care of it.

Bloodborne Pathogens Safety Policy – B-03

Bloodborne Pathogens Safety Program

Purpose

There has been an increase in the prevalence of Human Immunodeficiency Virus, Hepatitis B and Hepatitis C Virus in the blood of the general public. This has increased the risk of exposure to these viruses to employees of the City of Council Bluffs who provide services to other individuals. Especially, when these employees are exposed to blood and body fluids and Universal Precautions are not taken.

Council Bluffs employees that are exposed to blood and body fluids need to consider this exposure as potentially infected with HIV and/or other bloodborne pathogens. They need to adhere rigorously to infection control precautions to minimize the risk of exposure to blood and body fluids.

The objective of the City of Council Bluffs Bloodborne Pathogens Program will be to reduce the risks of serious infections to employees of the City exposed to blood or body fluids and to any potentially contaminated sources on the job.

The major part of this objective will be achieved through effective training of employees.

The training will include:

- Background information about bloodborne diseases
- Modes of transmission
- Means to reduce the risk of exposure by designating specific procedures and personal protective equipment (Universal Precautions) to be used in the work setting.
- Vaccination and follow-up programs.
- An explanation of the biological hazard sign and labeling system/or coloring coding of bags and containers.

Scope

Definition of Bloodborne Pathogens

Bloodborne Pathogens are pathogenic microorganisms that are present in human blood and can infect and cause disease in humans. These pathogens include, but are not limited to, Hepatitis B virus (HBV), Hepatitis C (HCV) and Human Immunodeficiency Virus (HIV).

Definition of Exposure

Exposure means a specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood or other potentially infectious body fluid that results from the performance of an employee's duties.

Body Fluids

Body fluids are fluids that have been recognized by the Center for Disease Control as directly linked to transmission of HIV, HBV and HCV and/or to which universal precautions apply. These fluids include; blood, semen, blood products, vaginal secretions, cerebrospinal fluids, synovial fluids, pleural fluids, peritoneal fluid, amniotic fluid and concentrated HIV, HBV and HCV.

Blood is the single, most important source of HIV, HBV and HCV and other bloodborne pathogens in the occupational setting.

The risk of transmission of HIV, HBV and HCV from feces, nasal secretions, sputum, sweat, tears, urine and vomitus is extremely low or nonexistent unless they contain visible blood.

All blood spills and spills of body fluids with visible blood shall be cleaned up by using a solution of sodium hypochlorite (household bleach) diluted 1-10 with water shall be used for disinfecting or a commercially prepared solution that has been approved and that is effective in killing HIV, HBV and HCV. The Fire Department and Health Department uses an acceptable solution Quant 64 for cleanup. Gloves shall be used with the cleanup procedure. Disposal of clean up materials shall be as listed under waste disposal.

Universal Precautions

The term "Universal Precautions" refers to a system of infection disease control which assumes that every direct contact with body fluids is infectious and requires every employee exposed to direct contact with body fluids be protected as though such body fluids were HIV, HBV or HCV infected. Therefore, universal precautions are intended to prevent exposure for parenteral mucous membranes and non-intact skin exposure to bloodborne pathogens.

These requirements are not optional. IOSHA provides full legal force to universal precautions. Employers and employees must treat blood and certain body fluids as infectious.

Employees shall wash their hands with soap and water immediately, or as soon as possible, after removal of gloves or other personal protective equipment and after skin contact with blood or other potentially infectious material.

Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there is potential for occupational exposure.

Personal Protective Equipment

Personal Protective Equipment is specialized clothing or equipment worn by an employee to protect him/her from a hazard.

When there is a potential for occupational exposure, the City of Council Bluffs shall provide appropriate personal protective equipment such as gloves, gowns, CPR masks, goggles, safety glasses or face shields or respiratory protective devices. The City will repair or replace required personal protective equipment when necessary.

The City of Council Bluffs employees are to use appropriate personal protective equipment. Failure to do so will result in disciplinary actions as defined in the City Personnel Policies.

Gloves

City Employees will provide a barrier between their skin and the blood of others. This can be done with latex, non-latex or vinyl gloves.

The use of gloves is particularly important and mandatory in the following circumstances:

- Rendering first-aid such as applying a dressing to stop bleeding
- If the employee has cuts, abraded skin, chapped hands, dermatitis or non-intact skin and have the potential to come in contact with body fluids
- When examining abraded or non-intact skin with active bleeding
- During any invasive procedure
- During all cleaning of body fluids and decontaminating procedures
- During any other procedures where an employee has the potential to come in contact with body fluids

Disposable gloves are a one-time use. They will not be washed or disinfected for reuse.

No gloves shall be used if they are peeling, cracked or discolored or if they have punctures, tears or other evidence of deterioration.

Disposable gloves shall be replaced as soon as possible when visibly soiled, torn, punctured or when their ability to function as a barrier is compromised.

After removing protective gloves, it is imperative that the hands or other skin surfaces be washed thoroughly and immediately wash with soap and water after contact with body fluids.

All personal protective equipment shall be removed immediately upon leaving the area or as soon as possible if overtly contaminated and placed in an appropriately designated container for disposal.

In the case that soap and water are not available, an appropriate antiseptic hand cleaner, hand wipe material and disposable bag will be furnished by the City. The hand cleaner and/or hand wipe shall be used immediately after contact with body fluids and the employee must wash with soap and water as soon as hand washing facilities are accessible.

The City of Council Bluffs requires that all employees who work with blood products or body fluids shall use appropriate personal protective equipment unless under rare or extraordinary circumstances may temporarily decline to use this equipment because it may prevent the delivery of health care to the public or be a hazard to the safety of the worker or coworkers.

When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

Risk Categories

High Risk:

- Definition-An incident that poses significant potential for transmission of infectious agents.
- Needle puncture with hollow point needle which has been in contact with blood, body tissue or fluids that contain visible blood.
- Contract with blood onto an open break in skin or cut.
- Puncture with used lancet, suture needle or other surgical instrument.
- Definite splash of blood or bloody material into eyes, nose or mouth.
- CPR with direct mouth to blood contact.
- Blood splash to intact skin of the face with "possible" splash into eyes, nose or mouth.
- Wound from sharp container whose source of contamination cannot be reliably identified.

High Risk Procedures, action to take at the time of incident

- Wash affected area with soap and running water or flush the mucous membranes of the eye, nose or mouth with water.
- Clothing should be washed thoroughly as soon as possible if they have become contaminated with blood or body fluids containing visible blood.
- Notify immediate supervisor.
- Fill out Employee Injury Report.
- The employee should proceed to the City's medical provider for appropriate testing and/or treatment.

Low Risk, potential for transmission of infectious agents unlikely or nonexistent, examples

- Contact with urine, saliva, tears, sputum or stool which shows no visible blood.

- Puncture/laceration from sharps not contaminated with blood or body fluid.
- Exposure of blood to intact skin.
- Puncture from hollow point needle used to administer fluids/medications into IV line if no blood is visible in the tubing.
- Action to take, Wash affected area with soap and water.
- Notify immediate supervisor.
- Fill out Employee Injury Report.

Employee Exposure Determination

Class A Exposure Employees (highest risk)

Emergency Care Division Employees, Firefighters and Public Health Nurses

- The control of severe bleeding as a lifesaving procedure.
- Starting of IV's.
- Administration of medications/vaccines.
- Performing CPR.
- Other emergency care rendered in an uncontrolled workplace.
- Blood and equipment cleanup.
- Drawing of blood samples.

Class B Exposure Employees

Police Officers

- Emergency care given in an uncontrolled workplace.
- Lifesaving procedures such as the control of severe bleeding.
- Performing CPR.
- Blood and equipment cleanup.
- Emergency situations that are not medically related.

Class C Exposure Employees

Public Works Sewer Division, Public Works Waste Water Treatment Division, City Garage and Building Maintenance, Sanitarians

- Exposure to blood or body fluids containing visible blood throughout the City's sanitary sewers.
- Exposure to items containing blood and/or body fluids in the City's sanitary sewers or collected at the City pump stations.
- Performing blood or body fluid cleanup.

Class D Exposure Employees

All other City of Council Bluffs employees where incidental exposure that may take place on the job and that are neither reasonable nor routinely expected. Assisting a coworker who has a nose bleed is one example of a non-routine task, so long that immediate hand washing is done after helping your coworker.

Information about Human Immunodeficiency Virus

Human Immunodeficiency Virus (HIV), the virus that causes acquired immunodeficiency syndrome (AIDS), is transmitted through sexual contact and exposure to infected blood or blood components in body fluids.

The Center for Disease Control studies have shown the rate of inactivation is rapid outside the body, 90% to 99% within two hours. This rate is accelerated when exposed to a chemical germicide. A 1:10 solution of household bleach is an inexpensive and effective germicide.

Although some anti-viral agents may extend survival, there is currently no available treatment to cure HIV infection.

The Center for Disease Control has made the following recommendations:

- Treat all blood and other body fluids as potentially infected.
- Adhere rigorously to universal precautions to minimize the risk exposure to blood and body fluids.

Information about Hepatitis B

Although Human Immunodeficiency Virus (HIV) remains the bloodborne disease that causes the general perception of greatest exposure risk, in truth, Hepatitis B (HBV) has been documented to offer the greatest occupational exposure risk as it is 100 times more infectious than HIV. HBV is a communicable disease that is spread through contact with infected blood or body fluids. Most cases of viral hepatitis follow a mild course with early symptoms described as flu like. Approximately 5% to 10% become chronic carriers of the disease and transmit the disease to others. HBV causes liver cancer, cirrhosis and death in 1-2% of patients.

For some individuals, the disease process may be long, perhaps years and typically ends with the individual developing liver cancer. Immunization against hepatitis B can prevent infection, cirrhosis and liver cancer.

The Vaccine (anti-HB's)

Recombinant vaccines are made from common baker's yeast cells through genetic engineering. The yeast-derived vaccines do not contain human blood products. The vaccine is given by injection on three separate dates. Usually, the first two doses are given 1 month apart, and the third dose, 5 months after the second dose. Persons with immune-system abnormalities, such as dialysis patients, have less response to the vaccine, but over half of those receiving the vaccine do develop antibodies. Full immunization requires 3 doses of vaccine over a six month period although some persons may not develop immunity even after three doses. There is no evidence that the vaccine has ever caused hepatitis B. However, persons who have been infected with HBV prior to receiving the vaccine may go on to develop clinical hepatitis in spite of immunization. The duration of immunity is unknown at this time.

There are some occasional side effects associated with the vaccine. The most common side effect is soreness at the site of injection. Illnesses, such as neurological reactions, have been reported after the vaccine is given, but hepatitis B vaccine is not believed to be the cause of these illnesses. As with any drug or vaccine, there is a rare possibility that allergic or more serious reactions or even death could occur. No deaths however have been reported in persons who have received the vaccine. Giving hepatitis B vaccine to persons who are already immune or to carriers will not increase the risk of side effects.

People should not get hepatitis B vaccine if they have ever had a life-threatening allergic reaction to baker's yeast (the kind used for making bread) or to a previous dose of hepatitis B vaccine. People who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting hepatitis B vaccine.

No information is available about the safety of the vaccine for unborn babies. It is recommended that your physician be consulted prior to receiving the vaccine.

After three doses, the hepatitis B vaccine is 96% effective in preventing hepatitis B infection in those who received the vaccine. Protection for normal, healthy adults given vaccine lasts 5 to 9 years. Booster doses of hepatitis B vaccine have demonstrated by an anamnestic antibody response to a booster dose given 5 to 12 years later.

Hepatitis B Vaccinations

City of Council Bluffs employees that are exposed by the nature of their work and/or are under substantial risk to direct contact with body fluids warrant Hepatitis B vaccination.

The City will offer Hepatitis B vaccinations, Hepatitis A and Tetanus vaccinations free of charge, in amounts and at the times prescribed by standard medical practice to employees of the following departments and/or divisions:

- Emergency Care Division
- Fire Department (as deemed necessary)
- Police Department (as deemed necessary)
- Sewer Division
- Parks Department (as deemed necessary)
- Waste Water Treatment Division
- Public Health Nurses
- Sanitarians

Employees who choose not to accept the vaccine must sign a declination form, but may be vaccinated at a later date if they change their mind. A copy of the declination form is on the last page of this policy.

Hepatitis B Testing

HBV and antibody testing shall be available to an employee who desires such testing prior to deciding whether or not to receive the HBV vaccination.

If an unvaccinated employee is found be immune to HBV by virtue of adequate antibody titer, and if the employee has a sufficient exposure, the City would require additional testing and then possibly vaccinations would be given.

Therefore, the City of Council Bluffs believes that the Hepatitis B vaccinations are for the employee's best interest. The vaccines are relatively safe and inexpensive when compared to the potential problems and cost that an acquired hepatitis infection can cause.

Definition of Antibody Titer

A baseline level of immunity that has been established by test procedures.

Housekeeping

All places of employment, passageways, storerooms and service rooms shall be kept clean and orderly and in a sanitary condition.

The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition.

In the event of a blood or body fluid spill, the following cleanup procedures should be followed.

- Assume that all body fluids are contaminated.
- Contain the spill; do not let anyone enter area unless they are doing the cleanup.
- Personal protection equipment will be used when cleaning up a spill. This includes rubber gloves, eye and face protection and a mask if there is potential for the body fluids to get in your mouth, nose or eyes.
- Place the cleaned up material in a red biohazard waste bag for disposal.
- Clean the area with 1:10 solution of Bleach and Water or an approved prepared cleaner.

- Any glass breakage, use a brush and dust pan, do not pick the glass up with your hands.
- Once the clean-up is completed, discard gloves in the biohazard bags and then wash your hands immediately with soap and water.
- Clean any cleaning materials such as a mop, which may be contaminated by using the 1:10 solution of Bleach and Water or other approved disinfectant.

Laundry

Although soiled linen has been identified as a source of large numbers of certain pathogenic microorganisms, the risk of actual disease transmission is negligible.

Rather than rigid procedures and specification, hygienic and common sense storage and processing of clean and soiled linen are recommended.

Soiled linen should be handled as little as possible and with minimum agitation to prevent gross microbial contamination of the air and of persons handling the linen.

All soiled linen should be bagged at the location where it was used, when feasible. Linen soiled with blood or body fluids should be placed and transported in bags that prevent leakage. Hot water used in cleaning soiled linen should be at 160 Degrees F, washed with detergent and bleach. They should be washed for at least 25 minutes.

Specimens: Lab

All specimens of body fluids shall be put in a well-constructed container with a secure lid to prevent leaking during transport and shall be disposed of in an approved manner.

Resuscitation Equipment

Pocket masks, resuscitation bags or other ventilation devices shall be provided in strategic locations and to key personnel where the need for resuscitation is likely. This will minimize the need for emergency mouth-to-mouth resuscitation.

Waste Disposal Container

Any receptacle used for solid or liquid waste or refuse shall be constructed in order that it does not leak or overflow. It needs to be thoroughly cleaned and maintained in a sanitary condition. It shall be equipped with a solid, tight fitting cover. These Bio-Hazardous waste containers are kept at each fire station.

The interior of the container shall be cleaned with a disinfectant after initial cleanup. A solution of household bleach diluted 1 part bleach and 10 parts water should be used for cleaning the container or other approved cleaners that is designed for this type of clean up, for example Quad 64.

The container will be identified by a biological hazard placard or by using a red container with the words "biological hazard" on the container. It shall be lined with a heavy red impervious bag to contain Biohazardous Waste. The recommended procedure is to double bag the material.

The Bio-Hazardous Bags will be supplied to each location, Bio-Hazard disinfectant and vinyl gloves to be used in the event of a Bio-Hazardous Waste Spill. In the event of a spill, put on vinyl gloves, spray area with disinfectant, use paper towels to mop up the infected area and place these soiled materials in the Bio-Hazard Red bag and deliver bag to nearest fire station to be placed in Bio-Hazard container. The fire department personnel will dispose of the Bio-Hazardous waste at a local hospital in which they have an agreement with in order to dispose of the Bio-Hazardous waste properly.

Sharp Instruments and Disposable Items

Needles shall not be recapped, purposely bent or broken by hand, removed from disposable syringes of otherwise manipulated by hand.

After they are used, disposable syringes and needles, scalpel blades and other sharp items shall be placed in puncture resistant containers for disposal.

Such containers shall be easily accessible to personnel needing them and located in all areas where needles are commonly used. They shall be so constructed that they will not spill their contents if knocked over and will not themselves allow injuries when handled.

These containers shall also be located in settings where blood is drawn and needles are used.

Biological Hazard Tags

Warning labels with the orange or orange-red biohazard symbol will be used to identify the actual or potential presence of a biological hazard.

The label/tag will have the word "BIOHAZARD" and/or the biological hazard symbol printed on it.

The label/tag will be used to identify the actual or potential presence of a biological hazard.

A biological hazard includes body fluids (as previously defined); materials contaminated with them or other potentially infectious material.

The Biological Hazard Tag will be affixed to an impervious bag unless the bag already has a Biological Hazard Tag printed on it.

Tags or labels are used to prevent accidental exposure to infectious waste.

Tags or labels are used to prevent loss or unintentional removal.

"BIOHAZARD" material will be double bagged where puncture is likely or outside contamination has occurred.

Call 328-4688, Risk Management to replace materials needed for clean-up of a Bio-Hazardous Spill. Follow the rules for disposal of the Bio-Hazardous Materials.

Procedure

- City employees that have a possible exposure to biological hazards will be trained on the meaning of the tags.
- They shall be instructed to use double bagging where puncture or outside contamination is likely.
- They shall be instructed to call Risk Management to replace materials needed for Bio-Hazardous Clean Up Materials.

General Information

- As it relates to the City of Council Bluffs Bloodborne Pathogens Program, we will follow or exceed implementation schedule as set forth in the IOSHA 1910.1030 Bloodborne Pathogens Standard.
- Occupational exposure may occur in many ways: however, the primary concern is blood to blood contact. Blood is the single most important source of HIV, HBV, HCV and other bloodborne pathogens in the occupational setting. The City of Council Bluffs Bloodborne Pathogens Program was written to prevent exposure to blood and to deliver HBV immunizations to City employees who have an occupational exposure.
- City workers may be exposed to infectious body fluids based upon their work assignments.
- Neither HIV, HBV or HCV is transmitted by casual contact in the work place.
- The same personal protective equipment and work practices utilized to prevent occupational transmission of HBV are effective in the preventing transmission of HCV and HIV. The City Blood borne Pathogen Program requires "Universal Procedures" when working with blood and/or body fluids.

- The difference in medical preventative measures for the three viruses is the availability of preventive vaccines. A vaccine that prevents HBV is available. At the present time there is no vaccine currently known to prevent HIV and HCV infection.

Procedures

New City employees will receive training in:

- Information and education with regard to HIV, HBV and HCV.
- Infection Control Procedures.
- State of Iowa and internal injury report for actual or potential exposures.
- Hepatitis A & B Vaccination Policy and Tetanus Vaccinations.
- Vaccinations will be given as stated within the IOSHA standard time limit.

All City of Council Bluffs employees will receive annual training in procedures and in any revision in policy of the City Bloodborne Pathogens Program.

The training records will be kept and shall include the following:

- Dates of training sessions.
- The summary of the training session.
- The name(s) and the qualifications of person(s) conducting the training.
- The person(s) attending the training session will sign their name(s), job titles, department and date attended.
- Training records will be maintained for three years after the training date.

A copy of the IOSHA Bloodborne Pathogens Standard 1910.1030 will be available to City employees in the Risk Management Department.

The policy and procedures have been drafted consistent with the best medical and legal evidence available. The City of Council Bluffs reserves the right to review and revise the policies and procedures and to adopt practices to be consistent with future medical and legal recommendations.

The City of Council Bluffs Bloodborne Pathogens Program will be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

B-03

Hepatitis A or B Vaccine or Tetanus Declination (mandatory)

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

Employee's Printed Name_____

Employee's Department and Division_____

Employee's Signature_____

Date_____

CELL PHONE SAFETY POLICY – B-04

Cell Phone Safety

Cell Phones are wonderful Safety Tools

- You can report a breakdown without getting out of your vehicle and be in danger of being struck by oncoming traffic or accosted by a stranger.
- You will never have to stand out in bad weather hoping for someone to stop and help.
- You can report your location directly to a road service, the local police or emergency medical service immediately.
- You can notify your family, friends or workplace if you are being delayed by accident, traffic or weather.
- Drunk or dangerous drivers can be reported to authorities immediately.
- If you get lost, you can call for directions from your vehicle.

Cell Phone use while driving can cause Accidents

- Dialing a phone or answering a phone can cause you to take eyes off the road or be distracted.
- Holding a phone means you won't have both hands on the wheel.
- Some phone conversations, especially disagreements, can divert your attention from driving safely and alertly.
- Statistics show that a significant percentage of accidents take place while someone is using a cell phone.

Cell Phone Safe Driving Practices

- Pull over to the shoulder or off the road before you make a call.
- When receiving a call, tell the caller to wait a second so you can pull over to the side of the road or to an off road parking area to take the call.
- Limit your cell phone use to emergencies.
- Do not encourage friends or family to call you when they know you will be on the road.
- Have a hands free phone and memory dialing capabilities in case a call becomes necessary while you are on the road.

COMPRESSED GASES AND WELDING SAFETY POLICY – B-05

Compressed Gases and Welding Safety

Compressed Gases

- Care shall be exercised in handling all compressed gas cylinders. They shall not be dropped, jarred or exposed to temperature extremes.
- Cylinders shall have the valve cap or valve protection device in place at all times, except when in actual use or connected to a welding set.
- Cylinders shall not be laid horizontal and rolled.
- Cylinders shall have their contents properly identified.
- Cylinders not having fixed hand wheels shall have keys, handles or nonadjustable wrenches on the valve stems while the cylinders are in service.
- 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.
- When cylinders are transported by powered vehicles, they shall be secured in a vertical upright position with the valve cap or valve protection device in place.
- Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials (especially oil or grease) by a minimum distance of 20 feet or by a five foot high noncombustible barrier.
- Cylinders shall not be placed where they might become part of an electric circuit.
- Employees shall never force connections that do not fit nor shall they tamper with the safety relief devices of cylinder valves.
- Before the regulator is removed from a cylinder, the valve shall be closed and all pressure released from the regulator.
- A leaking cylinder shall not be used. Such cylinders shall be taken outdoors away from sources of ignition. The supervisor shall be notified.
- A flame shall never be used to detect gas leaks.
- The recessed top of cylinders shall not be used as a place for tools.
- No attempt shall be made to mix gases in a cylinder or to transfer gas from one cylinder to another.

- A sign Danger-No Smoking, Matches or Open Lights or one with equivalent wording shall be conspicuously posted in rooms or at entrances to areas where fuel gas is used or stored.
- **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.
- **Oxygen**
  - Oxygen shall never be used as a substitute for compressed air.
  - When an oxygen cylinder is in use, the valve should be opened fully to prevent leakage around the valve stem.
  - Do not stand in front of the valve when opening.
  - Oil, grease or similar materials shall not be allowed to come in contact with any valve, fitting, regulator or gauge of oxygen cylinders.
- **Acetylene**
  - An acetylene cylinder valve shall not be opened more than one and one half turns of the spindle and preferably no more than three fourths of a turn.
  - Employees shall only use acetylene in a free state at pressures lower than 15 psi.
- **Chlorine**
  - Chlorine containers shall be stored and secured in a cool place, protected from moisture.
  - Every precaution shall be taken to prevent accidental discharge of the gas and protective equipment shall be readily available for use in an emergency.
  - Protective equipment to have available include air supplied respirators, leak stoppage kits and any other protective equipment that may be needed.
  - Only employees who have been properly trained and provided with the necessary protective equipment shall attempt to stop cylinder leaks.
  - Should a chlorine leak develop, the cylinder shall be placed so that only gas (vapor) escapes. (An ammonia swab may be used to detect leaks). Water shall not be sprayed or poured on chlorine leaks.
  - Chlorine cylinders shall never be used or stored near flammable materials.
  - For additional information concerning compressed gas requirements, refer to OSHA standard 29 CFR 1919.252.

Welding and Cutting

- Welding and cutting shall be performed only by experienced and properly trained employees. Before welding or cutting is started, the area shall be inspected for potential fire hazards.
- 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.
- Suitable fire extinguishing equipment shall be immediately available at all locations where welding and cutting equipment is used.
- Matches and compressed gas lighters shall not be carried by welders or their helpers when engaged in welding or cutting operations.
- A fire watch shall be maintained wherever welding or cutting is performed and for 30 minutes after completion of welding, for locations where combustible materials present a fire hazard.
- 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 wetted down, personnel operating arc welding or cutting equipment shall be protected from possible shock.
- To protect eyes, face and body during welding and cutting, the operator shall wear an approved helmet, face shield or goggles, proper protective gloves and clothing. Do not wear cuffs or collars which tend to catch sparks and hot slag. Helpers or attendants shall also wear proper eye protection. The proper lens shade for electric arc welding is usually 10, 11 or 12. The proper lens shade for oxyacetylene is usually 5, 6 or 7.
- Proper eye protection shall be worn to guard against flying particles when the helmet or goggles are raised and while chipping slag.
- Machinery, tanks, equipment, shafts or pipes that could contain explosive or highly flammable materials shall be thoroughly cleaned and decontaminated prior to application of heat.
- In dusty or gaseous spaces where there is a possibility of explosion, welding or cutting equipment shall not be used until the space is adequately ventilated.
- Welders shall place welding cable, hoses and other equipment so that they are clear of passageways, ladders and stairways.

- Where the work permits, the welder should be enclosed in an individual booth or shall be enclosed with noncombustible screens. Workers or other persons adjacent to the welding areas shall be protected from rays by shields or shall be required to wear appropriate eye and face protection.
- After welding or cutting operations are completed, the welder shall mark the hot metal or provide other means of warning other workers of potential danger.
- Use tongs or vice grips when handling hot material.
- Potentially hazardous materials in fluxes, coatings, covering and filler metals are released to the atmosphere during welding or cutting operations. While welding or cutting, adequate ventilation or approved respiratory protection equipment shall be used. Special precautions shall be taken when using materials that contain cadmium, fluorides, mercury, chlorinated hydrocarbons, stainless steel, zinc, galvanized materials, beryllium and lead. Employees shall refer to your MSDS's for information regarding use of these materials for special precautions and special personnel protection equipment.
- Employees welding or cutting in confined spaces shall conform to the requirements of the City's Confined Space Policy.
- The use of welding or cutting torches shall be avoided during the last half hour of the shift if possible, to reduce the after hours fire risk.
- **Gas welding and cutting**
    - Approved back flow check valves shall be used on gas welding rigs in both gas and oxygen lines.
    - Welding hoses shall not be repaired with tape. Do not use if gauges are broken or defective.
    - Matches shall not be used to light a torch: a torch shall not be lighted on hot work. A friction lighter or other approved device shall be used.
    - Shut off all supply valves when not in use.
    - Oxygen or fuel gas cylinders shall not be taken into confined spaces.
    - Only approved gas welding and cutting equipment shall be used.
- **Electric Welding**
    - The electric welding machine shall be properly grounded before use.
    - Only approved welding equipment shall be used.

- Rules and instructions supplied by the manufacturer or affixed to the machine shall be followed.
- Welders shall not strike an arc with an electrode, whenever people are nearby who might be affected by the arc.
- When electrode holders are to be left unattended, the electrodes shall be removed and the holders shall be so placed or protected that they cannot make electrical contacts with employees or conducting objects.
- When the welder shall leave the work or stop work for any appreciable length of time, or when the welding machine is to be moved, the power supply switch to the equipment shall be opened (off).

- **For additional information concerning the requirements for welding and cutting, refer to OSHA standard 29 CFR 1910.252 and 29 CFR 1910.253**.

CITY OF COUNCIL BLUFFS CONFINED SPACE POLICY – B-06

Confined Space Entry

Purpose

The purpose of this policy is to prevent personal injury and illness to City of Council Bluffs employees and contractors, while performing duties in confined spaces as per 29 CFR 1910.146.

Objectives

The objectives of this policy are to establish a written program outlining general guidelines governing confined space and permit-required confined space entry. The written program will address the following elements:

- Confined space definitions/hazards
- Assessment process and identification of spaces
- Entry requirements for non-permit confined spaces
- Entry requirements for permit-required confined spaces
- Alternate entry procedures
- Confined space personnel duties and responsibilities
- Precautions and pre-planning before entry
- Rescue plan/provisions
- Proper safety equipment for confined space entry
- Hot work or the use of chemicals in a confined space
- Contractor performed work

Department heads have the responsibility to:

Implement this confined space entry policy by

- Directing all supervisors to evaluate and classify confined space in their work environment and to document this for future entrants.
- Identify and train employees for appropriate confined space entry. Notify risk management for training for confined space entry.
- Ensuring that all necessary equipment is available to comply with this policy.
- Require the use of entry permits for every permit-required confined space entry.

- Enforce compliance with this policy. All appropriate employees presently employed and all new employees must be trained and responsible for the purpose and use of this confined space entry policy.

Supervisors have the responsibility to:

- Identify and evaluate the confined space areas in their work environment that are affected by this confined space entry policy.
- Ensure that all affected employees receive the appropriate training and equipment.
- Require the use of entry permits for every permit-required confined space entry.
- Enforce compliance with this policy.
- Act as an entry supervisor and determine if acceptable entry conditions are met as a permit space, oversee entry operations and terminate entry upon conclusion of the permit.

Employees have the responsibility to:

- Understand their assigned tasks relating to confined space entry.
- Apply the proper training and equipment to safely work in confined spaces.
- Assist with the assessment and identification of confined spaces.
- Comply with the directives of this policy.
- Act as the entry supervisor when delegated and trained as such.

Confined Space Rescue

- Any time the attendant or entrant recognizes any warning sign, symptom of exposure he or she shall exit the confined space immediately.
- The entrant shall be connected to a retrieval system including a full body safety harness connected to a winch and tripod by means of a tagline and yoke. Entrant to be removed from confined space via these means.
- Any time entrant requires an entry rescue, fire department to be notified immediately to make rescue. Prior to doing a confined space entry, the fire department should be notified concerning the entry so they will be aware of the location of the confined space entry and prepared if an entry type rescue is needed.

- If location has an in house rescue team, the in house rescue team needs to be on stand by for any confined space rescue. The fire department should be notified in the event when any entry type rescue is needed.

Risk Management Responsibilities

- Provide training to appropriate supervisors and assist in training of employees in the City of Council Bluffs confined space entry policy.
- Audit each department's compliance with this policy on an annual basis as per 29 CFR 1910.146.
- Assist with identification of permit required confined spaces, with the identification of the necessary equipment for entry.

Confined Space Definitions and Hazards: A Confined Space is any space that has the following characteristics.

- Large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit.
- It is not designed for continuous human occupancy.

A Permit-Required Confined Space: Is any confined space that has one or more of the following characteristics:

- Contains or has known potential to contain a hazardous atmosphere.
- Contains material with the potential for engulfment of an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or a floor that slopes downward and tapers to a smaller cross section.
- Contains any other recognized serious health hazard.
- Examples of permit-required confined spaces include process vessels, crawl spaces, vats, boilers, storage tanks, pipelines, wells, manholes, sewers, ventilation and exhaust ducts, pits or any underground areas.

The most common hazards that should be recognized and associated with entry into a confined space can be categorized as follows:

- Oxygen-deficient or enriched atmospheres. Normal air contains approximately 78% nitrogen, 20.95% oxygen by volume with the remaining composition made up of gases such as argon, carbon dioxide, etc.

- When oxygen falls below 19.5%, asphyxiation is threatened. Likewise, when an atmosphere contains more than 23.5% oxygen, it can be an extremely volatile atmosphere and creates a hazard. Confined spaces with either oxygen deficient or oxygen enriched atmospheres should not be entered unless they are properly controlled, as through appropriate ventilation.
- Oxygen deficiency hazards within a confined space result from consumption or displacement. Consumption of oxygen in a confined space can occur from work being performed such as welding, cutting or brazing, by certain chemical reactions such as the oxidation of metal and through bacterial action such as fermentation.
- Oxygen deficiency via displacement involves other gases or vapors being present in quantities which reduce or displace available oxygen present. Decomposing organic matter can produce methane, carbon monoxide, carbon dioxide and hydrogen sulfide which can reduce and displace available oxygen. Operation involving the introduction and use of cleaning agents, adhesives or other chemicals can also displace available oxygen.
- Flammable/Combustible Atmospheres. Two situations which create flammable atmosphere: the availability of oxygen in the air: and a flammable gas vapor or dust in the proper mixture. If a source of ignition is present or introduced into a confined space with the right combination of combustible gas, vapor or dust and air, an explosion will occur.
- Toxic atmospheres. Any chemical, exhibiting toxic properties in a confined space is a cause for concern. In these cases, no entry should be made until the atmosphere is properly controlled, or the entrant is properly protected. All chemicals have a concentration at which a toxic response is elicited. Most chemical substances should be considered hazardous in a confined space because of the lack of air distribution.
- Engulfment hazards. Engulfment hazards exist in confined spaces by the surrounding and capture of a person by finely divided particulate matter, such as grain, sand or any liquid resulting in suffocation.
- Other hazards. This category primarily involves mechanical or crushing hazards, other than engulfment, and electrical hazards which can be safety guarded against by the proper procedures required by the City's lockout/tagout policy.

Assessment Process and Identification of Confined Spaces

- It is the intent of this safety policy that all departments involved in confined space entry will work to access and compile data about the hazards contained in various confined spaces that are required to be entered in the workplace.
- Information to be compiled should include the type of hazard involved and classification of the confined space. In addition, after assessment, all permit only confined spaces must be marked with a sign reading "Danger, Permit Required Confined Space, Do Not Enter" or by other equally effective means, such as a printout, map, etc., that is a permit only space.

Entry Requirements for Non-Permit Confined Spaces

- If the confined space is a "Non-Permit" confined space, the space may be entered by authorized employees without the need for a written permit or attendant under this procedure.
- Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
- The atmosphere in the confined space shall be tested, using a properly calibrated gas detector. Field calibration should be done prior to every use. The atmosphere shall be tested at four (4) foot intervals in the direction of entrant travel and side to side, for a minimum response time as specified by the manufacturer of the instrument being used, down to the level where work is to be performed.
- The atmosphere within the space shall be continuously monitored while workers are within the space, either by the entrant or by an optional attendant.
- If at any time during the entry, a hazardous atmosphere is detected, all employees shall leave the space immediately and report to their supervisor prior to any attempts to re-entry.
- Smoking in or around a confined space is prohibited.

Entry Requirements for Permit Required Confined Spaces

- Determine if confined space entry is necessary. Avoid permit required confined space entry if possible.

- The Entry Supervisor should complete the "Entry Permit" form issued and authorized by a specifically designated representative of the department, as well as reviewing past assessment data, prior to work beginning in the confined space.
- Set up barriers or take other measures to prevent unauthorized entry into the space. A Confined Space "Danger" sign along with the permit must be posted at the entrance to the Permit Space.
- If entry is to be performed where pedestrian or vehicle traffic poses a danger, appropriate traffic control measures shall be used, including, but not limited to, affected employees wearing traffic safety vests.
- Identify and evaluate any hazards existing in the space to assure acceptable entry conditions are met prior to entry into the space. Where possible, hazards should be minimized or eliminated by blanking or blinding, isolation, line breaking, lockout/tagout or other appropriate methods.
- Initially, the atmosphere outside of the confined space shall be tested to determine if any hazards are present. The atmosphere within the confined space shall then be tested, using a properly calibrated gas detector, and the results recorded on the confined space entry permit. The atmosphere shall be tested at four (4) foot intervals in the direction of the entrant travel and side to side, for a minimum response time as specified by the manufacturer of the test equipment being used, down to the level where work is to be performed. The confined space atmosphere shall also be tested on a continuous basis while workers are in the space.
- The Confined Space Entry Permit must be completed by the designated Entry Supervisor and reviewed in detail by the authorized Entrants and Attendants, prior to entry into the confined space.
- *If the atmosphere inside the space is within acceptable limits, authorized employees may enter the space using the equipment listed on the Entry Permit and based upon the type of hazard for this space. If the atmosphere inside the space is not within acceptable limits, the space shall be ventilated until testing indicated that an acceptable atmosphere exists. Ventilation shall continue while there are employees inside the space.
- Where applicable, a retrieval system shall be used by each employee who enters the confined space, such as a chest or full body safety harness worn by the employee, connected to a winch and tripod by means of a tagline and yoke. Where a retrieval system is infeasible or creates a greater hazard, employees should carry 5 minute escape air packs for the purpose of egress only.

- An attendant shall be stationed outside the space while there are workers inside the space. The ratio of 3 entrants to 1 attendant shall not be exceeded.
- Constant communication shall be maintained between the entrants inside the space and the attendant.
- All appropriate personal protective equipment shall be worn while entry is in progress.
- Smoking in or around a confined space is prohibited.
- Artificial lighting shall be explosion proof, if the space contains or has the potential to contain an explosive atmosphere.
- *If the gas detector sounds an alarm, workers shall exit the space immediately and may not reenter until the atmosphere has been determined as safe, using methods as described in earlier steps including the issuance of a new entry permit and notifying the designated entry supervisor.
- All entry permits are to be canceled by the designated entry supervisor upon completion of assigned duties. The confined space shall then be returned to its working condition and secured to prohibit unauthorized entry.
- *Note that the exceptions to items * designated, for specifically trained employees that are designated to work in hazardous atmospheres or perform rescues with the use of SCBA (self-contained breathing apparatus) or other supplied air equipment.

Alternate Entry Procedures

- If a confined space has a “Hazardous Atmosphere Only”, as contained in section (c) (5) (i) of 29 CFR 1910.146, and can be determined by the data on file that the only hazard posed by the permit space is an actual or potential hazardous atmosphere, the space must still be entered with a written permit provided that the space can be maintained in a safe condition by continuous forced air ventilation.
- A space classified as a permit required confined space may be reclassified as a non-permit confined space if the permit space poses no actual or potential atmospheric hazards or if all hazards within the space are eliminated without entry into the space. These spaces shall be considered as permit required until the atmosphere in the confined space has been tested using a properly calibrated gas detector, and the space continuously ventilated.

- The atmosphere shall be tested at four (4) foot intervals in the direction of entrant travel and side to side, for a minimum response time as specified by the manufacturer of the test instrument being used, down to the level where work is to be performed.
- Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
- When entrance covers are removed, the opening shall be promptly guarded by a temporary barrier that will prevent an accidental fall through the opening and that will protect each employee, working in the space, from foreign objects entering the space.
- The designated entry supervisor shall be notified prior to entry.
- Ventilation of the space shall be continuous for the duration of the entry, and shall be supplied from a clean source.
- Smoking in or around a confined space is prohibited.
- Constant communication shall be maintained between the entrants inside the space and the attendant.
- The atmosphere within the space shall be continuously monitored to assure that the continuous forced air ventilation is maintaining a safe atmosphere.
- If at any time during the entry, a hazardous atmosphere is detected, all employees shall leave the space immediately and contact their designated entry supervisor. Note that there is an exception for specifically trained employees that are designated employees that are designated to hazardous atmospheres to perform work or rescues with the use of SCBA (self-contained breathing apparatus) or other supplied air equipment.

Confined Space Personnel Duties and Responsibilities

Duties of Attendants

- A proper trained attendant shall be stationed outside the permit-required confined space.
- The attendant shall have knowledge of the hazards that may be faced during entry, and an awareness of the possible behavioral effects of this hazard exposure.
- The attendant shall monitor the outside of the permit space, to prohibit unauthorized people from entering the permit-required space, in addition to the inside conditions.
- The attendant shall continuously maintain an accurate count of authorized in the permit space.

- The attendant shall maintain continuous communication with the entrant(s). The attendant shall be able to recognize confined space hazards and changing conditions that could affect employees in the space. If conditions become hazardous or if the entrants exhibit a marked behavior change, the attendant shall require the entrants to exit the space.
- In the event of an emergency, the attendant shall summon emergency service by using the radio or calling 911 by telephone if available.
- Ensure the safety of entrants working in the confined space by preventing any material or tools from falling in the space.
- The attendant shall perform no duties that might interfere with the attendant's primary duty to monitor and protect the entrants.
- Attendant will remain at his/her post except:

  - When replaced by equally authorized attendant
  - For self-preservation
  - To notify rescue personnel in an emergency

- Attendant will not enter the permit entry confined space unless:

  - Another attendant is in place
  - The authorized entrant has exited the space and is now acting as the attendant (rotation).
  - A rescue team has arrived and has appropriate personal protection equipment available.

Duties of the authorized Entrants

- The entrant shall know the hazards that may be faced during entry, including information on the method of exposure, sign or symptoms and consequences of the exposure.
- Perform the work in the confined space and properly use equipment as required for safe entry and operation in confined spaces.
- Communicate with the attendant as necessary to enable the attendant to monitor entrant status.
- If the entrant detects a prohibited condition, or recognizes any warning sign or symptom of exposure to a dangerous situation, the entrant shall communicate with the attendant and evacuate the space as quickly as possible.

Duties of Designated Entry Supervisors

- The designated entry supervisor shall know the hazards that may be faced during entry, including information on the method of exposure, signs or symptoms and consequences of the exposure.
- Verifies by checking that the means for summoning rescue services are operable and that all appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
- Terminates the entry and cancels the permit when the entry operations have been completed or a condition that is not allowed under the permit arises in or near the permit space.
- Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.
- Removes unauthorized individuals who have entered or attempt to enter a permit space.

Detailed training shall be provided to all employees who work in any of the above positions prior to their work in or around any confined spaces.

Precautions and Pre-Planning before entry

- Entry is to be made by authorized personnel only.
- An attendant is to be present whenever entry is made into any permit required confined space.
- The confined Space Entry Permit must be completed by the designated Entry Supervisor and reviewed in detail by the authorized Entrants and Attendants, prior to entry into the Confined Space.
- A sign or other means of posting that a confined space is being entered shall be placed at the opening of the confined space. The posting shall read: Danger-Confined Space Enter by Permit Only.
- Set up barriers shall be placed or other measures take to prevent unauthorized entry into the space.
- If entry is to be performed where pedestrian or vehicle traffic poses a danger, appropriate traffic control measures shall be used, including, but not limited to, affected employees wearing traffic safety vests.

- Before any entrance cover to a confined space is removed, the employee shall determine if it is safe to do so by checking for presence of atmospheric pressure or temperature differences by evaluating whether there might be a hazardous atmosphere in the space. The order of all test procedures, for monitoring a confined space is oxygen first, combustible gases and vapors second and then any toxic gases and vapors last.
- When covers are removed from confined spaces, the opening shall be promptly guarded by a railing; temporary cover or other barrier intended to prevent an accidental fall through the opening and to protect employees working in the space from objects entering the space.
- Identify and evaluate any hazards existing in the space to assure acceptable entry conditions are met prior to entry into the space. Where possible, hazards should be minimized or eliminated by blanking or blinding, isolation, line breaking, lockout/tagout or other appropriate methods.
- Entry into a confined space with an unsafe atmosphere shall be avoided if at all possible, unless performed by an employee designated to perform emergency work or rescues with SCBA (self-contained breathing apparatus) or other supplied air equipment.
- All permit entry confined spaces are to be purged prior to and during entry.
- If the atmosphere inside the space is within acceptable limits, authorized employees may enter the space using the equipment listed on the Entry Permit for the space. If the atmosphere inside the space is not within acceptable limits, the space shall be ventilated until testing indicates that an acceptable atmosphere exists. Ventilation shall continue while there are employees inside that space.
- After purging the area, and before entry, the confined space is to be tested using equipment capable or measuring oxygen content, for the presence of explosive and toxic gases. All equipment will be tested for operation and safety before reaching the job site.
- Test instruments, used to monitor atmospheres in enclosed spaces, shall be checked daily prior to use, using calibration gas cylinders. The minimum acceptable accuracy is +/- 10%. Some testing equipment does not require the equipment to be calibrated in this manner. Make sure the equipment being used is calibrated in the manner deemed for that equipment.
- All lifelines, harness, D-rings and any other equipment needed for entry or exit shall be inspected for defects before entry.

Rescue Plan/Provisions

If an emergency condition is perceived:

- Do not enter the space unless you are a trained rescuer or Council Bluffs Fire Department Personnel and are designated to perform confined space rescue for the City of Council Bluffs.
- Notify the Council Bluffs Fire Department immediately by calling 911 from your radio or cell phone.

    - State the nature of your request
    - State your name
    - State you location

- If the worker is attached to a rescue/retrieval system, promptly begin the retrieval process.
- The attendant is to monitor the situation until Rescue/Emergency Medical personnel arrive.

Proper Safety Equipment for Confined Space Entry

Recommended Equipment

- A confined space "Danger" sign
- Entry barrier or warning cones
- Portable gas detector
- Remote sampling pump with a 20 ft. clear plastic tubing for gas detector
- Industrial explosive proof flashlight
- Portable ventilator (Warning: Use extreme caution to prevent the buildup of carbon monoxide in the confined space when using gasoline powered ventilators)
- 25 ft. blower hose for ventilator
- Portable confined space floor sign
- Retrieval system, to include a full body safety harness connected to a winch and tripod by means of a tagline and yoke
- 5 minute escape air pack for safe egress only & extra tanks
- Personnel Protection Equipment to be used, such as hard hats, eye and face protection, gloves, hearing protection, etc.

Hot Work of the Use of Chemicals in a Confined Space

Hot work, such as heating, cutting, welding or soldering, or the use of chemical in a confined space, present special hazards by the very nature of the work, the hazardous environment it can create and the fact that hot work presents an ignition source to the environment.

Before any entry involving the use of hot work or chemicals can begin, a review of the confined space characteristics should first be carried out. All procedures and safety equipment shall be available as in a normal confined space entry. In addition the hazards that may arise from hot work or chemicals should be evaluated using a material safety data sheet. This may create a permit required space by introduction of the hot work or use of chemicals.

In addition, all hot work in a confined space requires a hot work permit, in addition to other applicable permits.

Employees should exercise extreme caution whenever introducing hot work of chemicals into a confined space.

If there are any questions during an entry, contact your designated entry supervisor.

Contractor Performed Work

It is the responsibility of all City of Council Bluffs contractors or consultants to comply with 29 CFR 1910,146, regarding Permit Required Confined Spaces. City of Council Bluffs employees should make every effort to:

- Identify confined spaces to which contractors may be exposed while on the job site.
- Inform contractors of precautions that may lessen the possibility of injury and exposure.
- Identify the location of confined spaces that contractors may be exposed to.

However, it is the contractors responsibility to inform his/her own employees about these hazards and the precautions required by the above standard. The information provided by City employees should be used as a guide only, with final determination to rest with the contractor or consultant.

Definitions Applicable to this Procedure

- **Acceptable entry conditions:** Conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit required confined space can safely enter into and work within the space.
- **Atmosphere:** The gases, vapors, mists, fumes and dusts within a confined space.
- **Attendant:** A trained individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space.
- **Authorized entrant:** A trained employee who is authorized by the employer or the employer's designee to enter a permit only confined space.
- **Blanking or blinding:** The absolute closure of a pipe, line, or duct by a fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line or duct with no leakage beyond the plate.
- **Emergency:** Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.
- **Engulfment:** The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction or crushing.
- **Entry:** The action by which a person passes through an opening into a permit required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
- **Entry Permit:** The written or printed document that is provided by the employer to allow and control entry into a permit space.
- **Entry Supervisor:** The designated person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations and for terminating entry as required by this policy.

- **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), injury or acute illness from one or more of the following causes:
    - Flammable gas, vapor or mist in excess of 10 % of its lower flammable level (LFL);
    - Airborne combustible dust at a concentration that meets or exceeds it LFL,
    - Atmospheric oxygen concentration below 19.5% or above 23.5%.
    - Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of the Code of Federal Regulations.
    - Any other atmospheric condition that is immediately dangerous to life and health.
- **Immediately Dangerous to Life or Health (IDLH):** Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.
- **Isolation:** The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as blanking or blinding; misaligning or removing section of line, pipes, or ducts; a double block and bleed system, lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.
- **Line Breaking:** The intentional opening of a pipe, line or duct that is or has been carrying flammable, corrosive, toxic material, an inert gas or any fluid at a volume, pressure or temperature capable of causing an injury.

- **Lower Explosive Limit (LEL):** The minimum concentration of a combustible gas or vapor in air which will ignite if an ignition source is present.
- **Non-Permit Confined Space:** A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

- **Oxygen Deficient Atmosphere:** An atmosphere containing less than 19.5% oxygen by volume.
- **Oxygen Enriched Atmosphere:** An atmosphere containing more than 23.5% oxygen by volume.
- **Permissible Exposure Limit:** The maximum 8 hour time weighted average of any airborne containment to which an employee may be exposed.

CITY OF COUNCIL BLUFFS DRIVING SAFETY POLICY – B-07

Driving Safely

This policy applies to any City Employee operating City vehicles, operating City equipment and required to have a CDL operators license or anyone operating large equipment for the City of Council Bluffs.

This section contains knowledge and safe driving information that all drivers should know. Equipment shall be operated in compliance with the law and the directives of the Department. Equipment and Vehicles shall not be driven at speeds in excess of the established speed limits, or at speeds greater than is reasonable and prudent under the conditions then existing.

Employees have no special privilege in traffic except when specifically authorized in the line of duty. Employees operating vehicles or equipment shall be familiar with the contents of the Iowa Driver Manual, pertinent traffic laws and directives of the Department.

Each operator shall be instructed in the operation, use and hazards of the particular piece of equipment he/she will operate. A demonstration of the handling ability of a prospective operator, witnessed by a qualified supervisor, is required before the operator begins work.

Vehicle Inspections

Safety is the most important reason you inspect your vehicle. Safety for yourself and for other road users. All vehicles and equipment shall be checked at the beginning of each shift to assure that the equipment or vehicle is in safe operating condition and free from apparent damage that could cause failure. Enclosed is the Daily Equipment Check List to be used for the daily inspection.

All serious defects shall be corrected before the vehicle is used. No modifications which affect the capacity of safe operation of equipment shall be made. Any tools or equipment must be secure when transported by City vehicles or equipment.

All slow moving equipment operating on streets or highways shall have amber rotating beacon(s) operating, visible from both front and rear under all operating conditions, and be equipped with a Slow Moving Placard. For night operation normal driving lights shall be on in addition to the above. Emergency four-way flasher lights will be used only when vehicle is stopped or standing.

What to look for:

Tire Problems

- Too much or too little air pressure
- Bad wear. You need at least 4/32 inch tread depth in every major groove on front tires. You need 2/32 inch on other tires. No fabric should show through the tread or sidewall.
- Cuts or other damage.
- Tread separation.
- Dual tires that come in contact with each other of parts of the vehicle.
- Mismatched sizes.
- Radial and bias-ply tires used together.
- Cut or cracked valve stems.

Wheel and Rim Problems

- Damaged rims.
- Rust around wheel nuts may mean the nuts are loose-check tightness. After a tire has been changed, stop a short while later and re-check tightness of lug nuts.
- Missing clamps, spacers, studs or lugs mean danger.
- Mismatched, bent or cracked lock rings are dangerous.
- Wheels or rims that have welding repairs are not safe.

Bad Brake Drums or Shoes

- Cracked drums.
- Shoes or pads with oil, grease or brake fluid on them.
- Shoes worn dangerously thin, missing or broken.

Steering System Defects

- Missing nuts, bolts, cotter keys or other parts.
- Bent, loose, or broken parts, such as steering column, steering gear box or tie rods.
- If power steering equipped-hoses, pumps, and fluid level; check for leaks.

- Steering wheel play of more than 10 degrees (approximately two inches movement at the rim of a 20 inch steering wheel) can make it hard to steer.

Suspension System Defects: The suspension system holds up the vehicle and its load. It keeps the axles in place. Therefore, broken suspension parts can be extremely dangerous. Look for:

- Spring hangers that allow movement of axle from proper position.
- Cracked or broken spring hangers.
- Missing or broken leaves in any leaf spring. If one fourth or more are missing, it will put the vehicle "out of service" but any defect could be dangerous.
- Broken leaves in a multi-leaf spring or leaves that have shifted so they might hit a tire or other part.
- Leaking shock absorbers.
- Torque rod or arm, u-bolts, spring hangers or other axle positioning parts that are cracked, damaged or missing.
- Air suspension systems that are damaged and/or leaking.
- Any loose, cracked, broken or missing frame members.

Exhaust System Defects: A broken exhaust system can let poison fumes into the cab. Look for:

- Loose, broken, or missing exhaust pipes, mufflers, tailpipes or vertical stacks.
- Exhaust system parts rubbing against fuel system parts, tires or other moving parts of vehicle.
- Exhaust system parts that are leaking.

Emergency Equipment: Vehicles should be equipped with emergency equipment. Look for:

- Fire Extinguishers
- Warning devices for parked vehicles, such as warning triangles.
- First Aid Kit

Engine Compartment: Check that the parking brakes are on and/or wheels chocked. Check the following:

- Engine oil level.
- Coolant level in radiator: condition of hoses.
- Power steering fluid level; hose condition if so equipped.
- Windshield washer fluid level.
- Battery fluid level.
- Automatic transmission fluid level (may require engine to be running),
- Check belts for tightness and excessive wear (alternator, water pump, air compressor)-learn how much "give" the belts should have when adjusted properly and check each one.
- Leaks in the engine compartment (fuel, coolant, oil, power steering fluid, hydraulic fluid, battery fluid).
- Cracked, worn electrical wiring insulation.

Start Engine and Inspect Gauges: Make sure parking brake is on, put gearshift in neutral or park if automatic and start engine and listen for unusual noises. Look at gauges:

- Oil Pressure. Should come up to normal within seconds after engine is started.
- Ammeter and/or voltmeter. Should be in normal ranges.
- Coolant temperature. Should begin gradual rise to normal operating range.
- Warning lights and buzzers. Oil, coolant, charging circuit warning lights should go out right away.

Check condition of controls: Check all of the following for looseness, sticking, damage or improper setting:

- Steering Wheel.
- Clutch
- Accelerator (gas pedal)
- Brake Controls
- Transmission Controls
- Horn
- Windshield wiper/washer
- Lights
    - Headlights
    - Dimmer Switch

- Turn Signal
- Four-Way Flashers
- Clearance, Identification, Marker Lights Switches
- Turn off engine, set parking brake, turn on headlights (low beams) and four way flashers.
- Do walk around inspections of lights, flashers, turn on high beams, and check turn signals and emergency warning lights.
- Clean all lights, reflectors and glass as you go around vehicle.

- Mirrors, make sure they are clean and adjusted properly.

Basic Control of Your Vehicle

- Acceleration, speed up smoothly and gradually so the vehicle does not jerk. Speed up gradually when traction is poor, as in rain or snow. If you use too much power, the drive wheels may spin causing you to lose control.
- Steering, hold the steering wheel firmly with both hands. Your hands should be on opposite sides of the wheel. If you would hit a curb or a chuckhole, the wheel could pull away from your hands unless you have a firm hold.
- Backing Safely, because you cannot see everything behind your vehicle, backing is always dangerous. Avoid backing whenever you can. When you park, try to park so you will be able to pull forward when you leave. When you have to back, the following safety rules apply:
    - Look at your path. Look at the line of travel before you begin to back up. Get out of your vehicle and walk around the vehicle and check to see whats behind your vehicle, check your clearance to the sides and behind your vehicle in the path of travel your vehicle will be taking.
    - Back slowly, always back as slow as possible. This will allow you to stop quickly, if necessary.

- If possible, use a spotter to help you back up with a vehicle. The spotter should stand near the back of your vehicle where you can see the spotter in your mirrors. Before you begin backing, work out a set of hand signals that you both understand. Agree on a signal for stop.
-

Controlling Speed & Stopping Distances: Driving too fast is a major cause of fatal crashes. You must adjust your speed depending on driving conditions. These include traction, curves, visibility, traffic and hills.

- There are three things that add up to total stopping distance: Perception Distance + Reaction Distance + Braking Distance= Total Stopping Distance
- Perception Distance. This is the distance your vehicle travels from the time your eyes see a hazard until your brain recognizes it. The perception time for an alert driver is about ¾ second. At 55 mph, you travel 60 feet.
- Reaction Distance. The distance traveled from the time your brain tells your foot to move from the accelerator until your foot is actually pushing the brake pedal. The average driver has a reaction time of ¾ second. This accounts for an additional 60 feet of traveled at 55 mph.
- Braking Distance. The distance it takes to stop once the brakes are put on. At 55 mph on dry pavement with good brakes it can take a heavy vehicle about 170 feet to stop. It takes about 4 ½ seconds.
- Total Stopping Distance. At 55 mph it will take about six seconds to stop and your vehicle will travel about the distance of a football field. (60 + 60 + 170 = 290 feet.)
- The effect of speed on stopping distances. Whenever you double your speed, it takes about four times as much distance to stop and vehicle will have four times the destructive power if it crashes. High speeds increase stopping distance greatly. By slowing down a little, you can gain a lot in reduced braking distance.

- The effect of vehicle weight on stopping distance. The heavier the vehicle, the more work the brakes must do to stop it and the more heat they absorb. But the brakes, tires, springs and shock absorbers on heavy vehicles are designed to work best when the vehicle is fully loaded. Empty trucks require greater stopping distances, because an empty vehicle has less traction. It can bounce and lock up its wheels giving much poorer braking. You can't steer or brake a vehicle unless you have traction. Traction is friction between the tires and the road. There are some road conditions that reduce traction and call for lower speeds.
- Slippery surfaces. It will take longer to stop and it will be harder to turn without skidding when the road is slippery. You must drive slower to be able to stop in the same distance as on a dry road. Wet roads can double stopping distance. Reduce speed by about one third (e.g., slow from 55 to about 35 mph) on a wet road. On packed snow, reduce speed by a half or more. If the surface is icy, reduce speed to a crawl and stop driving as soon as you can safely do so.
- Drivers must adjust their speed for curves in the road. If you take a curve too fast, two things can happen. The tires can lose their traction and continue straight ahead, so you skid off the road. Or, the tires my keep their traction and the vehicle rolls over. Tests have shown that trucks with a high center of gravity can roll over at the posted speed limit for a curve. Slow to safe speed before you enter a curve.
- You should always be able to stop within the distance you can see ahead. Fog, rain or other conditions may require that you slow down to be able to stop in the distance you can see.
- When you're driving in heavy traffic, the safest speed is the speed of the other vehicles. Vehicles going in the same direction at the same speed are not likely to run into one another.

General Rules

- Only specifically authorized employees who possess a valid license or permit for the equipment being used shall operate City owned motor vehicles or personally owned vehicles on City business.
- Drivers shall know and obey all state and local motor vehicle laws applicable to the operation of their vehicle.
- 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 may be operated.
- A driver shall not permit unauthorized persons to drive, operate or ride in or on a City vehicle.
- Seat belts shall be used by all occupants.
- Employees shall not permit anyone to ride on running boards, fenders or any part of the vehicle except on seats, except as required by special approved job activities.
- Employees shall not ride on trailers, except as required by special approved job activities.
- Employees shall not jump on or off vehicles in motion.
- Keep floorboards free of debris which may interfere with pedal operation.
- Red flags shall be displayed on the extreme ends of loads which project four feet or more behind any vehicle.

Inspection of Equipment

- The operator of the equipment shall complete the Daily Equipment Check List each time the equipment is used.
- The operator shall report any defects to the City Garage that may have developed during the day. Any item that could affect the safe operation of the equipment shall be repaired prior to continued used of the equipment.

Operation

- The operator of a motor vehicle shall comply with all laws or ordinances pertaining to vehicle operation.
- The operator of a motor vehicle shall clearly signal any intentions of turning, passing or stopping.
- Upon a signal from an emergency vehicle approaching from any direction, the operator of a City vehicle shall yield the right-of-way.

- Operators shall be prepared to stop and yield the right-of-way in all instances when necessary to avoid an accident.
- The operator of a vehicle shall be courteous toward other operators and pedestrians. The vehicle shall be operated in a safe manner and operator shall yield the right-of-way to pedestrians and other vehicles when failure to do so might endanger any person of another vehicle.
- The operator shall maintain sufficient distance behind other vehicles to safely stop the vehicle.
- Operators shall exercise added caution when driving through residential and school zones.
- 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.
- Before a vehicle is driven under or adjacent to energized equipment, the clearance shall be checked in order to insure at least ten feet will be maintained between the vehicle and the energized equipment.
- When proceeding down steep grades, the clutch shall not be disengaged. Trucks, particularly if heavily loaded, shall be in low gear on steep grades.
- All tools and equipment shall be properly secured during transport.
- Vehicles stopped or moving slow within roadways shall display an operating beacon, flashers and arrow panel, if available.

Fueling of Equipment

- Shut off vehicle engine before beginning fueling operations.
- Avoid spilling the gasoline by remaining at the pump until the process is completed. Do not fill the tank completely full, as the fuel needs room to expand.
- If spillage should occur, cover the spill area with an absorbent compound.
- Use only approved dispensing and containment equipment.
- No smoking or open flame shall be allowed within 100 feet of fueling areas or other areas where vapor could accumulate (i.e. pits, depressions, etc.). All fueling areas shall be supplied with ABC type dry chemical or type B fire extinguishers.

Backing

- Whenever possible, vehicles shall be positioned to avoid the necessity of backing.
- Extreme caution shall be exercised when backing a vehicle, to avoid injury to persons and to prevent property damage. Another employee, if present, shall be stationed at the rear of the vehicle to assist the driver in backing the vehicle safely.
- When backing a vehicle, which has an obstructed view to the rear, take the following precautions:
    - A reverse signal audible above the surrounding noise level shall be used.
    - An observer shall signal that it is safe to back.
    - Without an observer, get out of vehicle and look behind vehicle to see if anything behind vehicle.
    - Back slowly.
    - Watch both sides, but do not depend entirely on mirrors.
    - In any difficult backing situation, enlist the help of another person as a guide, when such help is available. Make sure your spotter is always viewable in your mirrors and you both know the stop signal.
    - Stop backing movement if spotter is not in view by the driver.

Parking

- When parking on a roadway, vehicles shall park off the road surface whenever possible.
- Trucks or trailers stopped on any public roadway shall be protected by warning devices, in accordance with state and local requirements.
- When it is necessary to park on an incline, the driver shall make sure the vehicle is left in a safe position.

Stopping on Highway

- Stopping on the highway shall be avoided.
- When it is absolutely necessary to stop on the highway, use extreme caution. Warning signals and lights shall be used.
- Rotating beacons shall be used if vehicle is so equipped.
- Emergency flashers shall be used.
- Flares or reflectors shall be placed to give adequate advance warning.
- If work is in progress, traffic control devices (together with flagmen, where necessary) shall be used in accordance with the manual on uniform traffic control.

City of Council Bluffs Hazard Communication/Right to Know Safety Policy – B-08

Policy

The City of Council Bluffs will maintain an effective "Hazard Communication Program/Right to Know Program" in accordance with the current Iowa Occupational Health and Safety Act regulation 29 CFR 1910.1200.

Purpose

The above noted regulation sets forth "to ensure that the hazards of chemical produced or imported by chemical manufacturers or importers are evaluated, and that information concerning their hazards is transmitted to affected employers and employees. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and personnel training."

This program as well as the regulation is otherwise referred to as the "Right to Know Law", which in effect is designed to provide knowledge, warning, protection and training to employees who may be exposed to hazards of chemicals and other materials.

Responsibility

The Risk Manager and an employee designated by the location supervisor or department head for each location are designated the responsibility for the administration of the "Hazard Communication Program".

All personnel will fully participate in the program as it may apply to their work area and work responsibility.

The "Hazard Communication Program" will consist of five basic components.

- Inventory and audit of hazardous chemicals and materials.
- Labels and labeling of hazardous chemicals and materials containers.
- Material Safety Data Sheets (MSDS) maintenance, distribution, availability and locations.
- Personnel training and information, general and specific.
- A written "Hazard Communication Program" as herewith prescribed.

The written "Hazard Communication Program" for each department with its associated inventory list, records, materials, etc. will be maintained and located at each location, Department Heads Office, Supervisor Office and Risk Management Office. Personnel may review the program, MSDS and chemical listing at their location.

Materials, Inventory, Audits

An initial inventory of all chemicals and materials will be made of all work areas and facilities. An annual audit will be conducted thereafter. All hazardous chemicals and materials required will be identified and listed. A copy of the listing for each work area will be kept with MSDS's for that area (or in a secure location if the MSDSs are in the public areas) and lists compiled to make a master list for the department. The MSDS book will have an index in an order that will make it easy to locate a specific MSDS sheet in the binder. Use common product names for the MSDS sheets rather than the chemical name and write it on the MSDS sheet if it is not already on the MSDS sheet. Suggested ways to make the MSDS book easier to use is to list the products in alphabetical order and number the pages and use tabs to mark each alphabetical section by letter. The MSDS book must be user friendly and set up in such a manner that a MSDS sheet for any product can be located easily.

A system will be maintained to add any newly introduced hazardous chemical or materials to the inventory. Typically the designated employee is responsible to update the inventory list for the specific location and ensure that the master list is updated and the MSDS is placed in the MSDS book, make sure an MSDS sheet arrives with each order and make sure there have not been any changes to the MSDS. If there have been changes, the new MSDS is put in the MSDS book and the old MSDS is removed and put in an inactive file. Copies of any new MSDS is sent to Department Head, copy to the location Superintendent and a copy to Risk Management and a copy placed in the locations MSDS book that is available for all employees.

MSDS for all materials and chemicals must be obtained and kept in a location that all employees have access to. The following materials and chemicals do not require an MSDS sheet:

- Hazardous Waste regulated by the EPA
- Tobacco and tobacco products
- Wood and wood products (in some cases wood dust is considered hazardous and an MSDS would need to be obtained)
- Articles (furniture, tools, etc, which do not release or otherwise result in exposure to a hazardous chemical under normal conditions of use).
- Foods, drugs or cosmetics intended for personal consumption by employees
- Consumer products used in the same manner as typical consumers use them. (Example: A quart bottle of glass cleaner would not require an MSDS but a 50 gallon barrel of the same glass cleaner would require an MSDS because you have more on hand than you would in your home).
- Most office products (e.g. white out, glues, copier inks and toners, stamp pads, etc.)

Labels and Labeling

All hazardous chemicals or materials on hand or received must have a label that will specify at least:

- The chemical name
- Any specific warning or other hazard information
- Identification of the manufacturer or supplier and address

A hazardous chemical or material label will not be removed from its container, nor will such a label be defaced.

Should it become necessary for a label to either be introduced by the department or replaced on a hazardous chemical or material container, such a label will display the 3 things required in the above label requirement. The designated employee will make sure that all incoming material or chemicals are labeled and contain the correct information.

It will be the responsibility of the designated employee to ensure that all secondary containers are properly labeled.

Information and Training

All personnel will be informed of the "Hazard Communication Program/Right to Know Law" annually, and/or at time of initial assignment and annually thereafter.

General program information and training will be provided to personnel at time of assignment and once a year thereafter. The training will cover the following:

- City of Council Bluffs Hazard Communication policy
- A basic definition of the regulation
- Statements of responsibility
- Information relating to labels and general warning signs
- Description of MSDS and how to read them
- Location of written hazard communication program
- Definition of hazardous chemicals:
    - Hazardous chemicals
        - Health Hazard
        - Physical Hazard
- Steps that department personnel can take to lessen or prevent exposure to hazardous chemicals or materials, i.e., knowledge of chemicals, storage, posting, personal protective equipment, chemical loads, warnings, eye wash and safety showers, training, etc.
- Methods and observation techniques used to determine the presence or release of hazardous chemical or materials in a work area, i.e., flame or fire, smell or odor, fumes, etching, color, irritation, etc.

- The emergency procedure to take in the event there is exposure to a hazardous chemical.
- Notice of hazardous chemicals or materials in an individual's work area.

Periodically, departmental personnel may be required to perform non routine work or tasks which will require the use of hazardous chemicals, materials or work in associated hazardous locations. The Designated Employee or the Risk Manager will complete a risk assessment of the task and ensure that any affected employee is trained on the hazardous chemicals or materials they could come in contact with. Such information shall include:

- Specific hazards that may be associated with the chemical or material.
- Protective and other safety measures to be taken
- Measures the department is taking to lessen or prevent hazards, i.e., ventilation, respirators, storage, safety watch personnel, postings and barriers, fire extinguisher, other personal protective equipment
- Review of chemical or material, MSDS or other technical information applicable to the work
- Review emergency procedures to be taken

Informing Contractors

It will be the responsibility of the designated employee to provide contractors working in departmental areas with the following information:

- Any hazardous chemicals to which they may be exposed while on the site
- Precautions and controls to be taken to lessen or prevent possible exposure by use of the appropriate protective measures

The designated employee will also be responsible for checking with contractors before work is started to gather and disseminate any information concerning chemical hazards that the contractor may be bringing onto the worksite.

Program Maintenance-Other Functions

Purchasing/MSDS Supply. A boiler plate statement will be applied to all purchase orders on request in order to obtain applicable MSDS on all required chemical or materials.

"Suppliers must furnish a "Material Safety Data Sheet" applicable to any item on this purchase request."

Other supplied chemical or materials: No chemical or material requiring a MSDS will be introduced into the department or any work area of the department by petty cash purchase, supplier samples or other means without a MSDS in the locations MSDS book or being provided a MSDS with the product.

CITY OF COUNCIL BLUFFS TOOL USE SAFETY POLICY – B-10

Hand Tools

- 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 supervisor has the authority and responsibility to take out of service unsatisfactory tools, regardless of ownership.)
- Defective tools shall be tagged to prevent their use, and shall be removed from the jobsite for repair or disposal.
- Employees shall always use the proper tool for the job performed. Makeshift and substitute tools shall only be used with proper authorization and under proper supervision.
- Hammers with metal handles, screwdrivers or knives with metal continuing through the handle and metallic tapes shall not be used on or near energized electrical circuits or equipment.
- Tools shall not be thrown from place to place or from person to person; tools that shall be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.
- Tools shall never be placed unsecured on elevated places.
- As impact tools such as chisels, punches, etc. become mushroomed or cracked, they shall be dressed, repaired or replaced before further use.
- Chisels, drills, punches, ground rods and pipes shall be held with suitable holders or tongs (not with hands) while being struck by another employee.
- Shims shall not be used to make a wrench fit.
- Wrenches with sprung or damaged jaws shall not be used.
- Pipes shall not be used to extend a wrench handle for added leverage unless the wrench was designed for such use.
- Tools shall be used only for the purposes for which they have been designed.
- Tools with sharp edges or points shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets.
- Wooden handles that are loose, cracked or splintered shall be replaced. The handle shall not be taped or lashed with wire.
- All cutting tools such as saws, wood chisels, drawknives or axes shall be kept in suitable guards or in special compartments.

- Tools shall not be left where they may cause a person to trip or stumble.
- 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.
- The insulation on hand tools shall not be depended upon to protect users from electric shock.
- Edged tools shall be kept sharp in order to cut cleanly with minimum effort.
- Never attempt to strike an object when it is at or above shoulder height, if possible. Use a ladder, scaffolding or platform, if necessary.
- Jacks shall be kept in good operating condition, and be the correct size for the job at hand. Jacks shall be placed on firm, level footing.
- For additional information concerning hand tools, refer to OSHA standard 29 CFR 1910.242.

Portable Electric Tools

- The noncurrent carrying metal parts or portable electric tools such as drills, saws and grinders shall be effectively grounded when connected to a power source unless:
  - The tool is an approved double-insulated type.
  - The tool is connected to a power supply by means or an isolating transformer or other insulated power supply, such as a 24 V DC system.
- All power tools shall be examined before use to ensure general serviceability and the presence of all applicable safety devices. The electric cord and components shall be given an especially thorough examination.
- Power tools shall be used only within their capability and shall be operated in accordance with the instructions of the manufacturer.
- All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.
- Electrical tools shall not be used where there is a hazard of flammable vapors, gases or dusts.
- Tools connected to a central power supply, including portable and vehicle mounted generators (not isolated and not double insulated) shall be protected by a ground fault interrupter (GFI) or by an assured grounding system.

Portable Electric Generators

- Generators shall be secured while in use, as they have a tendency to vibrate and move around.
- Be careful not to run electric extension cords through water puddles.
- Nearby employee shall stand clear when starting.
- Generators shall be effectively grounded while in use.

Electric Saws

- Keep track of the electric power cord so as to not cut through it.
- All guards provided with electric tools shall be kept on the tool and not wedged out of use.
- Saw operators shall use eye and face protective equipment and hearing protection.
- Use pusher sticks when cutting short stock.
- Never leave a saw running when the job is complete or if the saw is left unattended.
- Radial saws shall be fitted so that the blade cannot be pulled out beyond the edge of the cutting table and blade unit shall automatically return.
- Do not wear loose clothing when sawing.
- Cutting table shall be of adequate size to handle the material being cut.
- Use the proper blade for the job.
- For additional information concerning portable electric tools, refer to OSHA standard 29 CFR 1910, Subpart P.

Pneumatic Tools

- Compressed air and compressed air tools shall be used only by trained authorized employees.
- Pneumatic tools shall never be pointed at another person.
- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips or retainers shall be securely installed and maintained on pneumatic impact tools to prevent attachments from being accidentally expelled.

- Compressed air shall not be used for cleaning purposes except when reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.
- Compressed air shall not be used to blow dust or dirt from clothing.
- The manufacturer's safe operating pressure for hoses, pipes, valves, filters and other fittings shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- All hoses exceeding ½ 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.
- Eye protection, foot protection or any other protective devices shall be worn when their use could reduce the possibility of an injury.
- A pneumatic tool used where it may contact exposed live electrical parts shall have a nonconductive hose and an accumulator to collect moisture.
- Employees shall not use any part of their body to locate or attempt to stop an air leak.
- For additional information concerning pneumatic tools, refer to OSHA standards 29 CFR 1910, Subpart P.

Hydraulic Tools

- Hydraulic tools shall only be operated by trained, authorized employees.
- Manufacturer's safe operating pressures for hydraulic tools, hoses, valves, pipes, filters and fittings shall not be exceeded.
- Pressure shall be released before connections are broken unless quick acting, self-closing connectors are used.
- Employees shall not use any part of their body to locate or attempt to stop a hydraulic leak.

Bench Grinders and Portable Grinders

- Grinding wheels shall be securely attached and in good condition.
- Use the proper grinding wheel for the job.
- The use of properly adjusted machine guards and eye and face protection is required.
- Work shall be done in such a way that prevents the fingers from being brought into contact with the wheel. Keep both hands on the object being ground.

- A maximum of 1/8 inch gap shall be maintained between the grinding wheel and work rest.
- For additional information concerning abrasive tool requirement, refer to OSHA standard 29 CFR 1926.303.

Ladders-General

- Wooden ladders shall not be painted so as to obscure a defect in the wood.
- All ladders shall be inspected frequently and regularly. Ladders with weakened, broken or missing steps, broken side rails or other defects shall be tagged, removed from service and destroyed.
- Ladders and scaffolds shall be sufficiently strong for their intended use.
- Portable metal ladders shall not be used in the vicinity of energized electrical circuits.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is open, locked or guarded.
- When ascending or descending ladders, employees shall have both hands free and face the ladder.
- Only one employee shall work from a ladder at a time. If two employees are required, a second ladder shall be used.
- Only City-owned ladders shall be used by employees.
- Ladders shall not be used as scaffold platforms unless specifically designed for that purpose.
- Boxes, chairs, etc., shall not be used as ladders.
- For additional information concerning ladder requirements, refer to OSHA standards 29 CFR 1910.25, 29 CFR 1910.26 and 29 CFR 1910.27.

Straight Ladders

- Portable straight ladders shall not be used without nonskid bases.
- The base of the ladder shall be placed one-fourth the length of the ladder from the wall.
- Straight ladders shall not be climbed beyond the third step from the top.
- When working from a portable ladder, the ladder shall be securely placed, held, tied or otherwise made secure to prevent slipping or falling.
- When dismounting a ladder at an elevated position (such as a roof) the employee shall ensure the ladder side rails extend at least three feet above the dismount position or grab bars are present.

- Employees shall belt off to ladder whenever both hands shall be used for the job or a possibility of the employee falling from an elevated position exists.
- Ladders shall not be spliced together to form a longer ladder, unless specifically designed to be used as a section ladder.
- A ladder shall not be placed against an unsafe support.

Step Ladders

- The top step shall not be used, except for platform ladders.
- Step ladder legs shall be fully spread and the spreading bars locked in place.
- Step ladders shall not be used as straight ladders.
- When an employee is working on a step ladder more than 10 feet high (except platform ladders), the ladder shall be held by another person.

Machetes (Corn Knives), Weed Whips and Sickles (Manual Hand Tools)

- Shall be maintained with edges sharp, heads and handles secure. Do not sharpen the end of a machete.
- Use extreme caution while in close proximity of fellow employees.
- Have a firm footing when swinging a cutting tool.
- Strokes shall be directed away from the body. No cut shall be made downward toward the feet or toward any other part of the body.
- Be particularly careful when working in a cleared area. Sharp, protruding stubs can cause injury if fallen upon.
- Eye and face protection, foot protection should be worn.

Weed eaters (Gas or Electric Powered)

- Use factory guards if the unit is so equipped.
- Keep hands and feet clear of the moving cutting line at all times.
- Do not attempt to cut vegetation heavier than the weed eater is rated to handle.
- Fuel the machine only when the engine is cool. Fueling a hot unit poses the threat of fire or explosion.
- Use appropriate personnel protective equipment, eye protection, face protection and hearing protection.

Tractors and Mowers

- When making adjustments, working on, refueling, lubricating or clearing debris from the cutting area or discharge chute, the machine shall be shut off.
- Before dismounting the tractor, disengage the power mower drive clutch and shut off the engine to avoid the possibility of being run over by the tractor or mower.
- Keep the transmission in gear when going down steep grades.
- Engage the traction clutch gently, especially when pulling out of a ditch or when going uphill.
- Do not place the machine on an incline at such an angle that a tip over is possible. Mow up and down slopes with tractor type mowers.
- Be constantly alert for debris in the area to be cut. An object struck by a mower blade can become a high speed projectile capable of injuring people and property.
- When parking the tractor, the mower shall be lowered to the ground. The transmission shall be set in park or neutral and the park brake set if the unit is so equipped.
- Guards and shields shall be left in place while the machine is running.
- Eye protection should be worn.

City of Council Bluffs Lockout/Tagout Program – B-11

Definitions

- **Affected employee** – An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

- **Authorized employee** – A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

- **Capable of being locked out** – An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device or permanently alter its energy control capability.

- **Energized** – Connected to an energy source or containing residual or stored energy.

- **Energy isolating device** – A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:
    - A manually operated electrical switch
    - A disconnect switch
    - A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductor, and, in addition, no pole can be operated independently.
    - A line valve; a block; and any similar device used to block or isolate energy.
    - Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

- **Energy source** – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

- **Hot tap** – A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without interruption of service for air, gas, water, steam and petrochemical distribution systems.

- **Lockout –** The placement of a lockout device on any energy isolating device in accordance with an established procedure ensuring that the energy isolating device and equipment being controlled cannot be operated until the lockout device is removed.

- **Lockout device** – A device that utilizes a positive means such as a lock either key or combination type to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

- **Normal production operations** – The utilization of a machine or equipment to perform its intended production function.

- **Servicing and/or maintenance** – The utilization of a machine or equipment to perform its intended production function.

- **Servicing and/or maintenance** – Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustment or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

- **Setting up** – Any work performed to prepare a machine or equipment to perform its normal production operation.

- **Tagout –** The placement of a tagout device on an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

- **Tagout device –** A prominent warning device, such as a tab and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

General Requirements

The City of Council Bluffs department directors will establish lockout/tagout procedures through the use of this document. This standard practice instruction covers the servicing and maintenance of machines or equipment in which the unexpected energization or start-up of the machines or equipment or release of stored energy could cause injury to employees.

Application – The instruction applies to the control of energy during servicing and/or maintenance of machines and equipment. Normal production operations are not covered. Servicing and/or maintenance which takes place during normal production operations is covered if:

- An employee is required to remove or bypass a guard or other safety device.

- An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) of where an associated danger zone exists during a machine operating cycle.

  Exception: Minor tool change and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered if they are routine, repetitive and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection.

- The instruction does not apply to the following:

  - Work on cord and plug, connected electric equipment for which exposure to the hazards of unexpected energization or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
  - Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipeline, provided it is demonstrated that (1)continuity of service is essential, (2) shutdown of the system is impractical, and (3) special equipment is used which will provide proven effective protection for our employees.

Program Implementation

The City of Council Bluffs will establish a program and utilize procedures for affixing appropriate lockout devices and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy in order to prevent injury to employees.

- **Energy control program** – The City of Council Bluffs shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start-up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered inoperative.

  - **Tagout** – If an energy isolating device is not capable of being locked out, this employer's energy control program shall utilize a tagout system.

  - **Future requirements** – Whenever replacement or major repair, renovation of modification of a machine is performed, and whenever new machines or equipment are installed, energy isolating devices for such machine or equipment shall be designed to accept a lockout device.

Full Employee Protection

Lock out equivalency demonstration – In demonstrating that a level of safety is achieved in a tagout program which is equivalent to the level of safety obtained by using a lockout program, this employer shall demonstrate full compliance with all tagout related provisions together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as part of the demonstration of full employee protection shall include where possible the implementation of additional safety measures such as the:

- Removal of isolating circuit elements.
- Blocking of controlling switches.
- Opening of an extra disconnecting device.
- Removal of a valve handle to reduce the likelihood of inadvertent energization.
- Posting of an employee watch to insure compliance with tagout provisions.

Energy Control Procedure Exceptions

Once a facility evaluation has been accomplished, documented procedures will not be developed when the following conditions exist:

- The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees.

- The machine or equipment has a single energy source which can be readily identified and isolated.

- The isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment.

- The machine or equipment is isolated from that energy source and locked out during servicing or maintenance.

- A single lockout device will achieve a locked-out condition.

- The lockout device is under the exclusive control of the authorized employee performing the service or maintenance.

- The servicing or maintenance does not create hazards for other employees.

- The City, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance. In the event of such occurrences, energy control procedures will be developed.

Energy Control Procedures

- Once a facility evaluation has been accomplished, procedures shall be developed, documented and utilized for the control of potentially hazardous energy.

- **Procedural format** – The following format will be followed for each machine requiring procedures. The respective department directors will be responsible for the implementation of these procedures. The procedures shall clearly and specifically outline the scope, purpose, authorization, rules and techniques to be utilized for the control of hazardous energy and the means to enforce compliance including, but not limited to, the following:

  - A specific statement of the intended use of the procedure.

  - Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy (manufacturer's specification will be followed whenever possible).

  - Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the person(s) responsible for them.

  - Specific requirement for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices and other energy control measures.

City of Council Bluffs Evaluation.

The City of Council Bluffs Safety Committee, Risk Manager, Department Heads or Location Supervisors will evaluate facility(s) by department to determine which machines or pieces of equipment require steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy. A complete listing of machines/equipment having procedures will be maintained.

Protective Materials and Hardware

Appropriate lockout devices such as locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners or other hardware shall be provided by the City for isolating, securing or blocking of machines or equipment from energy sources based on the individual machine/equipment evaluation conducted by the City of Council Bluffs Safety Committee authorized to evaluate lockout/tagout requirements.

Selected criteria

- Lockout/Tagout devices shall be singularly identified; shall be the only device(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:

- Selected lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.

- Selected tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.

- Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.

- Standardization within the facility – Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: Color, shape, or size, and additionally, in the case of tagout devices, printing and format shall be standardized.

- **Removal requirement**

  - **Lockout devices** – Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

  - **Tagout devices** – Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

- **Identification requirements**

  - Lockout/tagout devices shall indicate the identity of the employee applying the device(s).

  - Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate, etc.

Periodic Inspections and Certifications

- **Inspections** The City of Council Bluffs shall conduct a periodic inspection of the energy control procedure for each machine or piece of equipment at least annually to ensure that the procedure and the requirements of this instruction are being followed.

  - ✓ The periodic inspection shall be performed by an authorized employee other than the one(s) utilizing the energy control procedure being inspected.

- ✓ Inspections will be conducted by the personnel authorized to evaluate lockout/tagout requirements.
- ✓ The periodic inspection shall be conducted to correct any deviations or inadequacies identified.
- ✓ Lockout inspections – Where lockout is used for energy control, the periodic inspection shall include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control procedure being inspected.
- ✓ Tagout inspections – Where tagout is used for energy control, the periodic inspection shall include a review between the inspector and each authorized and affected employee of that employee's responsibilities under energy control procedures being inspected.

- **Certifications** The City of Council Bluffs shall certify that the periodic inspections have been performed. The certification shall as a minimum identify:

  - ✓ The machine or equipment on which the energy control procedure was being utilized.
  - ✓ The date of the inspection.
  - ✓ The employees included in the inspection.
  - ✓ The person performing the inspection,

Initial Training

The City of Council Bluffs shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage and removal of the energy controls are acquired by employees. The training shall include the following:

- Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace and the methods and means necessary for energy isolation and control.
- Each affected employee shall be instructed in the purpose and use of the energy control procedure.

- All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

When tagout systems are used, employees shall also be trained in the following limitation of tags:

- Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
- When the tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored or otherwise defeated.
- Tags must be legible and understandable by all authorized employees, affected employees and all other employees whose work operations are or may be in the area in order to be effective. Non-legible or missing tags will be reported to the department supervisor immediately.
- Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Refresher Training

- Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.
- Additional retraining shall also be conducted whenever a periodic inspection reveals or whenever this employer has reason to believe that there are deviations from or inadequacies in the employee's knowledge or us of the energy control procedures.
- The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.
- Certification – The City of Council Bluffs shall certify that employee training has been accomplished and is being kept up-to-date. The certification shall contain each employee's name and dates of training.

Energy Isolation

Lockout or tagout shall be performed only by the authorized employees who are performing the servicing or maintenance.

Notification of Employees

Affected employees shall be notified of the application and removal of lockout devices or tagout devices. Notification shall be given before the controls are applied, and after they are removed from the machine or equipment.

Application of Control

The lockout or tagout procedures shall cover the following elements and actions and shall be done in the following sequence,

- **Preparation for shutdown** – Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled and the method or means to control the energy.

- **Machine or equipment shutdown** – The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

- **Machine or equipment isolation** – All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

- **Lockout device application**

    - Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.

    - Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a “safe” or “off” position.

- **Tagout device application**
    - Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- **Stored energy**
    - Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe.
    - If there is a possibility of reaccumulation or stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed or until the possibility of such accumulation no longer exists.
- **Verification of isolation** – Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

Release from Lockout or Tagout

- Before lockout or tagout devices are removed – Before lockout and tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:
    - The machine or equipment – The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.
    - Employees – The work area shall be checked to ensure that all employees have been safely positioned or removed.

- After lockout or tagout devices are removed – After lockout or tagout devices are removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

- Lockout or tagout devices removal – Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device. When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the department supervisor provided that specific procedures and training for such employer's energy control program. The City of Council Bluffs shall demonstrate that the specific procedure provides equivalent safety to the removal of the device by the authorized employee who applied it. The specific procedure shall include at least the following elements:

    - Verification that the authorized employee who applied the device is not at the facility.

    - Making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed.

    - Ensuring that the authorized employee has this knowledge before he/she resumes work at the facility.

Testing of Machines, Equipment or Components

Testing or positioning of machines, equipment or components thereof. In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:

- Clear the machine or equipment of tools and materials

- Remove employees from the machine or equipment area.

- Remove the lockout or tagout devices as specified as part of the individual machine procedures.

- Energize and proceed with testing or positioning.

- Deenergize all systems and reapply energy control measures in accordance with machine procedures and continue the servicing and/or maintenance.

Non-City Personnel (Contractors, Etc.)

- Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this instruction, the department supervisor or his/her designee and the outside employer shall inform each other of their respective lockout or tagout procedures.

- The department supervisor shall ensure that his/her employees understand and comply with the restrictions and prohibitions of the outside employer's energy control.

Group Lockout or Tagout

- When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

- Group lockout or tagout devices shall be used in accordance with the procedures required by this instruction governing individual procedures which shall include, but not necessarily limited to, the following specific requirements:

    - Primary responsibility will be vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock).

- Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the individual machine or equipment will be made.

- When more than one crew, craft, department, etc. is involved, assignment of overall job lockout or tagout control responsibility will be vested to an authorized employee designated to coordinate affected work forces and ensure continuity or protection.

- Each authorized employee shall affix a personal lockout or tagout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

Shift or Personnel Changes

Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization or start-up of the machine or equipment, or the release of stored energy.

Sample Lockout Procedure

The following sample lockout procedure is provided to assist the respective departments of the City of Council Bluffs in developing specific procedures to meet the requirement of this instruction. When the energy isolating devices are not lockable, tagout may be used, provided additional training and more rigorous periodic inspections are conducted. When tagout is used and the energy isolating devices are lockable, this employer will provide full employee protection, additional training and more rigorous periodic inspections as required. For more complex systems, more comprehensive procedure may need to be developed, documented and utilized.

City of Council Bluffs __Department Name____Lockout Procedure

Lockout Procedure for: Machine Name_____

Machine #_____

Machine Type_____

Purpose. This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employee perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

Compliance with this Program. All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance shall not attempt to start, energize or use that machine or equipment.

Sequence of Lockout

Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.

Name(s) Job Title(s) of affected employees and how to notify.

Name	Job Title	Notification Means

The authorized employee shall refer to the safety procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.

Type(s) and magnitude(s) of energy, its hazards and the methods to control the energy.

Type of Energy	Magnitude	Control Method

If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.)

Type(s) and location(s) of machine or equipment operating controls.

Types of Operating Controls Locations

De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).

Types of energy isolating devices Locations

Lock out the energy isolating device(s) with assigned individual lock(s).

Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.)

Type(s) of stored energy – methods to dissipate or restrain.

Type of Stored Energy	Methods to dissipate or restrain

Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.

Caution: Return operating control(s) to neutral or “off” position after verifying the isolation of the equipment.

Method of verifying the isolation of the equipment.

_____
_____
_____
_____
_____
_____
_____
_____
_____

The machine or equipment is now locked out.

Restoring equipment to service. When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken:

- Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.

- Check the work area to ensure that all employees have been safely positioned or removed from the area.

- Verify that the controls are in neutral.

- Remove the lockout devices and reenergize the machine or equipment.

- Note: The removal of some forms of blocking may require reenergization of the machine before safe removal.

- Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready to use.

Program Evaluation Form

Date_____ Machine/Equipment_____

Location_____ Department_____

Work Being Performed_____

Authorized Employee(s) doing work _____
_____
_____
_____

Authorized Employee(s) inspecting _____
_____
_____
_____

1. Are all employees conducting work on the equipment trained as "Authorized Employees" under the lockout program? Yes No N/A
   Notes_____

2. Were all Affected Employees effectively notified before lockout?
   Yes No N/A
   Notes_____

3. Can the Authorized Employees identify all hazardous energy sources for the Equipment? Yes No N/A
   Notes_____

4. Was the written lockout procedure used and followed?
   Yes No N/A
   Notes_____

5. Were all energy isolation points locked out by all employees working on the Equipment? Yes No N/A
   Notes_____

6. Were all blocking and bleed down steps completed?
   Yes No N/A
   Notes_____

7. Was a "zero energy test" conducted to ensure isolation?
   Yes No N/A
   Notes_____

8. Are all locks, tag and other lockout devices of types approved by the lockout Program. Yes No N/A
   Notes_____

   Recommendations:_____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____

_____
Signature of Authorized Inspector Date

_____
Signature of Authorized Employee(s) doing work Date

_____
Signature of Authorized Employee(s) doing work Date

City of Council Bluffs Office Safety Policy –B-12

Office Safety

Changes have occurred in the American workplace as a result of the new office technology and automation of office equipment. As with all new technology, these changes bring with it a set of health and safety concerns. In addition to obvious hazards such as slippery floors or an open file drawer, a modern office may also contain hazards such as, poor lighting, noise, poorly designed furniture and equipment and machines that emit gases and vapors when not properly maintained. Even the nature of office work itself has produced a whole host of stress related symptoms and musculoskeletal strains. For example, long hours at a poorly designed computer workstation can cause pains in the neck and back, shoulders, lower extremities, arms, wrists, hands, eyestrain and a general feeling of tension and irritability. The leading types of disabling accidents that occur within the office are the result of falls, strains and over-exertions, falling objects, striking against objects and caught in or between objects.

Falls

Falls are the most common office accident, accounting for the greatest number of disabling injuries. The disabling injury rate of falls among office workers is 2 to 2.5 times higher than the rate for non-office employees. One of the most common causes of office falls is tripping over an open desk or file drawer. Bending while seated in an unstable chair and tripping over electrical cords or wires are other common hazards. Office falls are frequently caused by using a chair or stack of boxes in place of a ladder and by slipping on wet floors. Loose carpeting, objects stored in halls or walkways and inadequate lighting are other hazards that invite accidental falls. Fortunately, all of the fall hazards are preventable. The following checklist can help stop a fall before it happens.

- Be sure the pathway is clear before you walk.
- Close drawers completely after every use.
- Avoid excessive bending, twisting, and leaning backward while seated.
- Always use a stepladder for overhead reaching. Chairs should never be used as ladders.
- Clean up spills immediately.
- Pick-up objects co-workers have left on the floor.
- Report loose carpeting or damaged flooring to building maintenance.
- Never carry anything that obscures your vision.
- Wear stable shoes with non-slip soles.

Strain and Overexertion

Although a typical office job may not involve lifting large or especially heavy objects, it's important to follow the principles of safe lifting. Small, light loads (i.e., stacks of files, boxes of computer paper, books) can wreak havoc on your back, neck and shoulders if you use your body incorrectly when you lift them. Backs are especially vulnerable; most back injuries result from improper lifting. Before you pick up a carton or load, ask yourself these questions:

Is this too heavy for me to lift and carry alone?

How high do I have to lift it?

How far do I have to carry it?

Am I trying to impress anyone by lifting this?

If you feel that the lift is beyond your ability, contact your supervisor or ask another employee to assist you.

Safe Lifting Steps

- Take a balanced stance, feet placed shoulder-width apart. When lifting something from the floor, squat close to the load.
- Keep your back in its neutral or straight position. Tuck in your chin so your head and neck continue the straight back line.
- Grip the object with your whole hand, rather than only with your fingers. Draw the object close to you, holding your elbows close to your body to keep the load and your body weight centered.
- Lift by straightening your legs. Let your leg muscles, not your back muscles, do the work. Tighten your stomach muscles to help support your back. Maintain your neutral back position as you lift.
- Never twist when lifting. When you must turn a load, turn your whole body, feet first.

- Never carry a load that blocks your vision.
- To set something down, use the same body mechanics designed for lifting.

Lifting from a Seated Position

Bending from a seated position and coming back up places tremendous strain on your back. Also, your chair could be unstable and slip out from under you. Instead, stand and move your chair out of the way. Squat and stand whenever you have to retrieve something from the floor.

Ergonomic Solutions to Backbreaking Tasks

If you are doing a lot of twisting while lifting, try to rearrange the space to avoid this. People who have to twist under a load are more likely to suffer a back injury.

Rotate through tasks so that periods of standing alternate with moving or sitting. Ask for stools or footrests for stationary jobs.

Store materials at knee level whenever possible instead of on the floor. Make shelves shallower (12-18 inches) so one does not have to reach forward to lift the object. Break up loads so each weighs less.

If you must carry a heavy object some distance, consider storing it closer, request a table to rest it on, or try to use a hand truck or cart to transport it.

Struck By or Striking Objects

Striking against objects is another cause of office injuries. Incidents of this type include:

- Bumping into doors, desks, file cabinets and open drawers.
- Bumping into other people while walking.
- Striking open file drawers while bending down or straightening up.
- Striking against sharp objects such as office machines, spindle files, staples and pins.

Pay attention to where you are walking at all times, properly store materials in your work area and never carry objects that prevent you from seeing ahead of you.

Objects striking employees occur as a result of:

- Office supplies sliding from shelves or cabinet tops.
- Overbalanced file cabinets in which two or more drawers were opened at the same time or which the file drawer was pulled out too far.
- Machines, such as typewriters, that were dropped on feet.
- Doors that were opened suddenly from the other side.

Proper material storage and use of storage devices can avoid these accidents.

Caught in or Between Objects

The last category of leading disabling incidents occurs as a result of office workers who get their fingers or articles of clothing caught in or between objects. Office workers may be injured as a result of:

- Fingers caught in a drawer, door or window.
- Fingers, hair or articles of clothing and jewelry caught in office machines.
- Fingers caught under the knife-edge of a paper cutter.

While working on office equipment, concentrate on what you are doing. If the equipment is out of date, missing safety devices such as guards and shields, place the equipment out of service until it can be repaired or replaced.

Material Storage

Office materials that are improperly stored can lead to objects falling on workers, poor visibility, and create a fire hazard. A good housekeeping program will reduce or eliminate hazards associated with improper storage of materials. Examples of improper storage include-disorderly piling, piling materials too high and obstructing doors, aisles, fire exits and fire-fighting equipment. The following are good storage practices:

- Boxes, papers and other materials should not be stored on top of lockers or file cabinets because they can cause landslide problems. Boxes and cartons should all be of uniform size in any pile or stack. Always stack material in such a way that it will not fall over.

- Store heavy objects on lower shelves.

- Try to store materials inside cabinets, files and lockers.

- Office equipment such as typewriters, index files, lights or calculators should not be placed on the edges of a desk, filing cabinet or table.

- Aisles, corners and passageways must remain unobstructed. There should be no stacking of materials in these areas.

- Storage areas should be designated and used only for that purpose. Store heavy materials so you do not have to reach across something to retrieve them.

- Fire equipment, extinguishers, fire door exits and sprinkler heads should remain unobstructed. Materials should be at least 18 inches minimum away from sprinkler heads.

- Electrical panels should remain unobstructed. Materials should be at least 36” away from all sides of a panel.

Work Station Ergonomics

Ergonomics means fitting the workplace to the workers by modifying or redesigning the job, workstation, tool or environment. Workstation design can have a big impact on office workers health and well-being. There are a multitude of discomforts which can result from ergonomically incorrect computer workstation setups. The most common complaints relate to the neck, shoulders and back. Others concern the arms and hands and occasionally the eyes. For example, poor chairs and/or bad postures can cause lower back strain, or a chair that is too high can cause circulation loss in legs and feet.

Certain characteristics of computer workstation jobs have been identified and associated with increased risk and musculoskeletal problems. These include:

- Design of the workstation
- Nature of the task
- Repetitiveness of the job
- Degree of postural constraint
- Work pace
- Work/rest schedules
- Personal attributes of individual workers

The key to comfort is in maintaining the body in a relaxed, neutral position. The ideal work position is to have the arms hanging relaxed from the shoulders. If a keyboard is used, arms should be bent at right angles at the elbow, with the hands held in a straight line with forearms and elbows close to the body. The head should be in lined with the body and slightly forward.

Arranging Your Workstation to Fit You

- Adjust the height of the chair's seat such that the thighs are horizontal while the feet are flat on the floor.
- Adjust the seat pan depth such that your back is supported by the chair back rest while the back of the knee is comfortable relative to the front of the seat.
- Adjust the back rest vertically so that it supports/fits the curvature of your lower back.
- With the arms at your sides and the elbow joint approximately 90 degrees, adjust the height/position of the chair armrests to support the forearms.

- Adjust the height of the keyboard such that the fingers rest on the keyboard home row when the arm is to the side, elbow at 90 degrees, and the wrist straight.

- Place the mouse, trackball or special keypads, next to the keyboard tray. Keep the wrist in a neutral position with the arm and hand close to the body.

- Adjust the height of the monitor such that the top of the screen is at eye level. If bifocals/trifocals are used, place the monitor at a height that allows easy viewing without tipping the head back.

- Place reference documents on a document holder close to the screen and at the same distance from the eye.

- A footrest may be necessary if the operator cannot rest his/her feet comfortably on the floor.

Applying Good Work Practices

The way a task is performed and the workstation environment it is performed in can influence the risk of injury and general work productivity. Good technique can make a job easy and safe to accomplish.

- Adjusting the drapes or blinds
- Moving the monitor away from sources of glare or direct light.
- Tipping the monitor slightly downward
- Using diffusers on overhead lighting
- Placing an anti-glare filter on the screen
- Clean the monitor screen on a regular basis
- Avoid cradling the telephone between the head and shoulder. Hold the phone with your hand, use the speaker phone or use a headset.
- Keep frequently used items like the telephone, reference materials and pens/pencils within easy reach.
- Position the monitor directly in front of the user.
- Move between different postures regularly.
- Apply task lighting as to your needs.

- Use the minimum force necessary to strike the keyboard/ten key keys.
- Use the minimum force necessary to activate the hole punch and stapler.
- Vary your tasks to avoid a long period of one activity.
- Take mini-breaks to rest the eyes and muscles. A break does not have to be a stop of work duties. However, it should be a different style of physical activity such as changing from keyboarding to using the telephone or filing.
- Neutralize distracting noise by using ear plugs, playing soft music or turning on a fan.
- Maintain a comfortable workplace temperature by using layers of clothing or a fan.

Indoor Air Quality and Ventilation

Indoor air quality (IAQ) is an increasingly important issue in the work environment. The study of indoor air quality and pollutant levels within office environments is a complex problem. The complexity of studying and measuring the quality of office environments arises from various factors including:

- Office building floor plans are frequently changing to accommodate increasingly more employees and reorganization.
- Office buildings frequently undergo building renovations such as installation of new carpet modular office partitions and free-standing offices and painting.
- Many of the health symptoms appearing are vague and common both to the office and home environment.
- Guidelines or standards for permissible personal exposure limits to pollutants within office buildings are very limited.

Many times odors are associated with chemical contaminants from inside or outside the office space, or from the building fabric. This is particularly noticeable following building renovation or installation of new carpeting. Out gassing from such things as paints, adhesives, sealants, office furniture, carpeting and vinyl wall covering is the source of a variety of irritant compounds. In most cases, these chemical contaminants can be measured at levels above ambient (normal background) but far below any existing occupational evaluation criteria.

NIOSH has conducted hundreds of building studies which indicate that the most likely sources of this problem are poor ventilation, poor thermal condition, too high or low humidity, emissions from office machines, copiers and other building contaminants and poor ergonomic layout of workstations.

Indoor Air Pollution

An inadequately ventilated office environment or a poorly designed ventilation system can lead to the buildup of a variety of indoor air pollutants. Air pollutants can originate within the building or be drawn from outdoors. Examples of sources that originate outside a building include: (1) pollen, dust and fungal spores; (2) general vehicle exhaust; (3) odors from dumpsters; and (4) re-entrained exhaust from the building itself or from neighboring buildings. Examples of sources that originate from within the building include: (1) building components and furnishings; (2) smoking; (3) maintenance or remodeling activities (painting, etc.); (4) housekeeping activities; (5) unsanitary conditions (standing water from clogged drains or dry traps) and water damage; and (6) emissions from office equipment or special use areas (print shops, laboratories or food preparation areas).

Controls to Prevent Indoor Air Pollution

The following recommendations and guidelines are useful in preventing indoor air quality problems:

- HVAC systems should receive periodic cleaning and filters should be changed on a regular basis on all ventilation systems.

- The ventilation system should introduce an adequate supply of fresh outside air into the office and capture and vent point air pollutant sources to the outside.

- Office machinery should be operated in well-ventilated areas. Most office machinery does not require local exhaust ventilation in areas that are already provided with 7-10 air changes per hour. Photocopiers should be placed away from workers' desks. Workers should vary work tasks to avoid using machines excessively.

- Office equipment should be cleaned/maintained according to the manufacturer's recommendations. Properly maintained equipment will not generate unhealthy levels of pollutants.

- Special attention should be given to special operations that may generate air contaminants (such as painting, pesticide spraying and heavy cleaning). Provisions for adequate ventilation must be made during these operations or other procedures, such as performing work off-hours or removing employees from the immediate area, utilized.

Lighting

Lighting is one of the most important factors affecting personal comfort on the job. The best lighting system is one in which the light level is geared to the task, where brightness ratios are controlled (no intensely bright or dark areas in one field of vision) and where ceilings, walls and floors are carefully chosen to minimize glare. Glare is defined as a harsh, uncomfortable bright light that shines directly in the eyes. Glare may be either direct, coming from lights or sunshine, or indirect, coming from a reflected surface.

Different tasks require different levels of lighting. Areas in which intricate work is performed, for example, require greater illumination than warehouses. Lighting needs vary from time to time and person to person as well. One approach is to use adjustable task lighting that can provide needed illumination without increasing general lighting.

Vision problems are one of the leading sources of complaints among office workers. Poor office lighting can cause eye strain and irritation, fatigue, double vision, watering and reddening of the eyelids and a decrease in the power of focus and visual acuity. Headaches as well as neck and back pains may occur as a result of workers straining to see small or detailed items. Poor lighting in the workplace is also associated with an increase in accidents. Direct and reflected glare and shadows as well as delayed eye adaptation when moving from bright surroundings into dark one (or vice versa) may prevent an employee from seeing tripping and other similar hazards.

There are a number of measures that can be used to prevent and control poor lighting conditions in the work environment:

- Regular maintenance of the lighting system should be carried out to clean or replace old bulbs and faulty lamp circuits.

- A light colored matte finish on walls, ceilings, and floors to reduce glare is recommended by the Illuminating Engineering Society.

- Whenever possible, office workers should not face windows, unshielded lamps or other sources of glare.

- Adjustable shades should be used if workers face a window.

- Diffuse light will help reduce shadows. Indirect lighting and task lighting are recommended, especially when work spaces are separated by dividers.

- Task lamps are very effective in supplementing general office lighting for those who require or prefer additional lighting. Some task lamps permit several light levels.

Noise

Noise can be defined very simply as unwanted sound. Office workers are subjected to many noise sources including video display terminals, high speed printers, telephones, fax machines and human voices. Noise can produce tension and stress as well as damage to hearing at high noise levels. For noise levels in offices, the most common effects are interference with speech communication, annoyance, and distraction from mental activities. The annoying effect of noise can decrease performance or increase errors in some task situations. If the tasks require a great deal of mental concentration, noise can be detrimental to performance.

Government standards have set limits for exposure to noise to prevent hearing loss in employees. The level of noise one can safely be exposed to is dependent on the intensity of the noise as well as the duration of exposure. In an office setting OSHA noise standards are rarely approached or exceeded. However, problems could arise in areas with a high concentration of noisy machines, such as high-speed printers or copy machines.

When employees are subjected to sound levels exceeding OSHA standards, feasible administrative or engineering controls must be utilized. If such controls fail to reduce sound levels, personal protective equipment must be provided and used to reduce sound levels.

For many of the annoying sounds in the office environment, the following measures are useful for reducing the level of noise or its effects:

- Select the quietest equipment if possible. When there is a choice between two or more products, sound levels should be included as a consideration for purchase and use.

- Provide for proper maintenance of equipment, such as lubrication and tightening of loose parts that can cause noise.

- Locate loud equipment in areas where its effects are less detrimental. For example, place impact printers away from areas where people must use the phone.

- Use barrier walls or dividers to isolate noise sources. Use of buffers or acoustically-treated materials can absorb noise that might otherwise travel further. Rubber pads to insulate vibrating equipment can also help to reduce noise.

- Enclose equipment, such as printer, with acoustical covers or housings.

- Schedule noisy tasks at times when it will have less of an effect on the other tasks in the office.

Office Electrical Safety

Electricity is essential to the operations of a modern automated office as a source of power. Electrical equipment used in an office is potentially hazardous and can cause serious shock and burn injuries if improperly used or maintained.

Electricity travels through electrical conductors which may be in the form of wires or parts of the human body. Most metals and moist skin offer very little resistance to the flow of electrical current and can easily conduct electricity. Other substances such as dry wood, porcelain or pottery offer a high resistance and can be used to prevent the flow of electrical current. If a part of the body comes in contact with the electrical circuit, a shock will occur. The electrical current will enter the body at one point and leave at another. The passage of electricity through the body can cause great pain, burns, destruction of tissue, nerves and muscles and even death. Factors influencing the effects of electrical shock include the type of current, voltage, resistance, amperage, pathway through the body and duration of contact. The longer the current flows through the body, the more serous the injury. Injuries are less severe when the current does not pass through or near nerve centers and vital organs. Electrical accidents usually occur as a result of faulty or defective equipment, unsafe installation or misuse of equipment on the part of the office workers.

Types of electrical hazards found in an office environment include the following:

Ungrounded Equipment

Grounding is a method of protecting employees from electric shock. By grounding an electrical system, a low-resistance path to earth through a ground connection is intentionally created. When properly done, this path offer sufficiently low resistance and has sufficient current-carrying capacity to prevent the build-up of hazardous voltages. Most fixed equipment such as large, stationary machines must be grounded. Cord and plug connected equipment must be grounded if it is located in hazardous or wet locations, if operated at more than 150 volts to ground, or if it is of a certain type of equipment (such as refrigerators and air conditioners). Smaller office equipment, such as typewriter and coffee pots, would generally not fall into these categories and therefore would not have to be grounded. However much of the newer office equipment is manufactured with grounded plugs as a precaution (three prong plugs). In such cases, the equipment should be used in accordance with the manufacturer's instructions. In any case, never remove the third (grounding) prong from any three-pronged piece of equipment.

Overloaded Outlets

Insufficient or overloading of electrical outlets should be avoided. A sufficient number of outlets will eliminate the need for extension cords. Overloading electrical circuits and extension cords can result in a fire. Floor mounted outlets should be carefully placed to prevent tripping hazards.

Unsafe/Non-approved Equipment

The use of poorly maintained or unsafe, poor quality, non-approved (by national testing laboratory) coffee makers, radios, lamps, etc. (often provided by or used by employees) should be discarded. Such appliances can develop electrical shorts creating fire and/or shock hazards. Equipment and cords should be inspected regularly, and a qualified individual should make repairs.

Defective, frayed or improperly installed cords for electrically-operated office equipment

When the outer jacket of a cord is damaged, the cord may no longer be water-resistant. The insulation can absorb moisture, which may then result in a short circuit or excessive current leakage to ground. If wires are exposed, they may cause a shock to a worker who contacts them. These cords should be replaced. Electric cords should be examined on a routine basis for fraying and exposed wiring.

Improper Placement of Cords

A cord should not be pulled or dragged over nails, hooks or other sharp objects that may cause cuts in the insulation. In addition, cords should never be placed on radiators, steam pipes, walls and windows. Particular attention should be placed on connections behind furniture, since files and bookcases may be pushed tightly against electric outlets, severely bending the cord at the plug.

Electrical Cords across Walkways and Work Areas

An adequate number of outlet sockets should be provided. Extension cords should only be used in situations where fixed wiring is not feasible. However, if it is necessary to use an extension cord, never run it across walkways or aisles due to potential tripping hazards. If you must run a cord across a walkway, either tape it down or purchase a cord runner.

Live Parts Unguarded

Wall receptacles should be designed and installed so that no current carrying parts will be exposed, and outlet plates should be kept tight to eliminate the possibility of shock.

Pulling Plugs to Shut Off Power

Switches to turn on and off equipment should be provided, either in the equipment or in the cords, so that it is not necessary to pull the plugs to shut off the power. To remove a plug from an outlet, take a firm grip on and pull the plug itself. Never pull a plug out by the cord.

Working on "Live Equipment"

Disconnect electrical machines before cleaning, adjusting or applying flammable solutions. If a guard is removed to clean or repair parts, replace it before testing the equipment and returning the machine to service.

Blocking Electrical Panel Doors

If an electrical malfunction should occur, the panel door, and anything else in front of the door will become very hot. Electrical panel doors should always be kept closed, to prevent "electrical flashover" in the event of an electrical malfunction.

Office Fire Prevention

The best time to think about fire safety is before a fire starts. Learn the location of fire escape routes and how to activate the fire alarm or notify other employees if a fire alarm is not available. Participate in practice fire drills on a regular basis. Become familiar with stairway exits, elevators may not function during a fire or may expose passengers to heat, gas and smoke.

- Heat producing equipment, copier, word processors, coffee makers and hot plates are often overlooked as a potential fire hazard. Keep them away from anything that might burn.

- Electrical appliances can be fire hazards. Be sure to turn off all appliances at the end of the day. Use only grounded appliances plugged into grounded outlets (three prong plugs).

- If electrical equipment malfunctions or gives off a strange odor, disconnect it and call the appropriate maintenance personnel. Promptly disconnect and replace cracked, frayed or broken electrical cords.

- Keep extension cords clear of doorways and other areas where they can be stepped on or chafed and never plug one extension cord into another.

- Do not allow combustible material (boxes, paper, etc.) to build up in inappropriate storage locations (near sources of ignition).

- Avoid the use of space heaters of any type in your office. Oftentimes, these heaters are placed under desks or in closed quarters. The heat from these units can catch paper on fire or melt the insulation around electrical appliances.

- Good housekeeping is essential for fire safety.

Through a program of scheduled inspections, unsafe conditions can be recognized and corrected before they lead to serious injuries. Take a few moments each day to walk through your work area. Look for items previously pointed out, such as objects protruding into walkways, file cabinets that are weighted toward the top or frayed electrical cords. Advise personnel in the area of the hazards and set about correcting them.

City of Council Bluffs Personal Protection and Personal Protection Equipment Safety Policy –B-13

Personal Protection and Personal Protection Equipment

Guards

- No guard shall be removed from any machine or piece of equipment except to perform required maintenance.
- 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).
- For additional information concerning guarding requirements, refer to OSHA standards 29 CFR 1910.243 and 29 CFR 1910 Subpart 0.

Lockout-Tag Out (Refer to City of Council Bluffs Lockout-Tag Out Safety Policy for more information)

- Before starting work on any circuit, machine, belting, shafting or other apparatus that is out of service, employees shall assure themselves that the apparatus is physically rendered inoperative and a tag out card is attached or a lockout device is properly attached to it.
- No switch, governor, valve, throttle or other device used to put a circuit or equipment into service shall be operated while a lockout or tag out device is attached to it.
- A lockout or tag out that has been placed for the protection of workers shall be removed only by authorization of the person in whose name it was placed and then only after the work has been completed and workers and tools are in the clear.
- Each employee in charge of work on any equipment shall have their lockout or tag out device secured to the apparatus control.
- For additional information concerning lockout/tag out requirements, refer to OSHA standard 29 CFR 1910.147.

Confined Spaces (Refer to City of Council Bluffs Confined Space Entry Policy for more information).

- Only employees who have been properly trained on the hazards associated with confined space work shall be allowed to enter a confined space.
- If work is to be performed in a confined space, the City's "Entry Permit" shall be followed.

- For additional information concerning confined-space requirements refer to OSHA standard 29 CFR 1910.146.

Warnings

- All warning signs shall be heeded. Persons seen in a dangerous situation shall be warned without being startled. Employees not required to be near potentially dangerous places shall keep away.
- For additional information concerning warning signs, refer to OSHA standard 29 CFR 1910.145.

Labeling (Refer to City of Council Bluffs Hazard Communication Policy for further information).

- Chemicals shall be prominently and accurately labeled. Refer to Hazardous Material Policy for more information.
- Containers containing dangerous chemicals shall be indicated with precautions such as poison or flammable.

Housekeeping

- Work areas inside and outside of vehicles and buildings shall be kept clean and orderly at all times.
- 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.
- Soiled rags shall be kept in metal or metal-lined bins having metal covers.
- 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.
- 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.
- Stairways, aisles, permanent roadways, walkways and material storage areas shall be kept reasonably clear and free from obstructions, depressions and debris.

- Materials and supplies shall be stored in an orderly manner to prevent their falling or spreading, also to eliminate tripping and stumbling hazards.
- No matches shall be left in clothes placed in lockers. Trash and unused clothing shall not be allowed to accumulate in lockers.
- Paper and other combustible materials shall not be allowed to accumulate, and weeds or other vegetation shall not be permitted to grow uncontrolled in or around storage yards, buildings or other structures.
- UL-approved, properly labeled red metal safety cans shall be used for the handling and use of flammable liquids such as gasoline in quantities no greater than five gallons. For quantities of one gallon or less, only the original container or UL-approved, properly labeled metal safety can shall be used.
- In any building, no more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet. No more than three such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room designed for storage of flammable and combustible liquids.
- When pouring or pumping gasoline or other flammable liquids from on 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.
- Flammable or combustible liquids shall not be stored in areas used for fire exits, stairways or areas normally used for the safe passage of people.
- Strict adherence shall be paid to no smoking and engine shutoff requirement at fuel dispensing locations.
- Eating areas shall be kept in a clean and sanitary condition.
- Restroom and washroom areas shall be kept in a sanitary state and shall be stocked with soap and hand towels or air dryers.
- For additional information concerning housekeeping requirements, refer to OSHA standers 29 CFR 1910.41 and 29 CFR 1910.106.

Hazardous Materials (Refer to City of Council Bluffs Hazard Communication Policy for further information).

- To reduce the risks of working with hazardous materials, manufacturers of hazardous materials are required to convey hazard information to the users of their products. This is accomplished through the use of Material Safety Data Sheets (MSDS) and container labeling.
- Employees shall know the location of the Material Safety Data Sheets for all hazardous materials known to be in their work area. A list of hazardous materials may be obtained from their supervisor.
- Material Safety Data Sheets shall be made available to contractors working on City property.
- Employees shall not use materials they find in unlabeled containers. Employees shall report unlabeled containers and containers with damaged labels to their supervisor.
- Employees shall not transfer a hazardous substance from a labeled container to an unlabeled container, unless the unlabeled container shall be under the exclusive control of the employee and used during their current shift.
- Employees shall report all hazardous materials spills to their supervisor. However, unless they have been properly trained, and have the required personal protective equipment, employees shall not attempt to clean up spills.
- For additional information concerning the requirements for working with hazardous materials, refer to OSHA standards 29 CFR 1910, Subpart Z; and 29 CFR 1910 CFR 1910.120.

Noise

- Hearing protection shall be worn when there is a possibility of high noise levels which would exceed allowable limits. When exposed to noise of 85 db (decibels) or more for eight hours, 95 db or more for four hours, 100 db or more for two hours or 105 db for more than one hour or loud impact noise, proper ear protection shall be worn. Protection shall be worn when exposed to impact noise more than 140 db, e.g., noise similar to a rifle or shotgun discharge.
- Specific areas where the noise level is greater the 85 db shall be identified and time limits stated. Employees shall wear proper protective devices when exposed beyond permissible limits.

- Proper ear protection may consist of any of the following: ear muffs, ear plugs, molded ear protectors or wax type ear plugs. Plain cotton is not acceptable. Ear protective devices shall be worn properly to provide the required protection and kept clean to reduce the possibility of ear infection.
- For additional information concerning noise, refer to OSHA standard 29 CFR 1910.95.

Lighting

- When natural illumination is not sufficient, artificial shall be used. Temporary lighting (except battery powered) shall be protected with approved guards. In areas where flammable or combustible vapors, liquids, gases, dust or fibers may be present, only explosion proof equipment approved for the hazardous location shall be used.

Smoking

- Smoking or open flames shall not be permitted in areas such as oil rooms, hydrogen or acetylene storage areas, fuel island or similar areas where dangerous gases might be present. Neither shall smoking be permitted in storerooms, battery rooms, flammable liquid storage and use locations, or other areas where quantities of combustible materials are kept. The absence of No Smoking signs shall not excuse smoking in these areas.

Clothing

- All employees shall always wear clothing and shoes that are suitable for the particular type of work which they are doing.
- A shirt or jacket (nonsynthetic material) with full length sleeves rolled down and buttoned and a hard hat shall be worn when working on or near live electrical parts.
- Each employee shall wear protective gloves suitable for the work.

- When work is performed in the vicinity of exposed energized parts of equipment, employees shall remove all exposed conductive articles, such as key or watch chains, rings or wrist watches or bands because such articles increase the hazards associated with inadvertent contact with the energized parts.
- Finer rings or unnecessary jewelry shall not be worn while climbing on or off structures or vehicles, or while performing any task where the ring might be caught under or snagged by a projecting item.
- Required protective equipment shall be provided by the City of Council Bluffs. Employees shall refer to Division Policies for additional clothing requirements.

Hand and Foot Protection (Refer to City of Council Bluffs Personal Protective Equipment Policy).

- Each employee shall wear gloves suitable for the work performed. Appropriate footwear required for special work shall be worn as directed by employee in charge.

Eye and Face Protection (Refer to City of Council Bluffs Personal Protective Equipment Policy). Appropriate and approved eye and face protection shall be worn when an employee is engaged in the following work activities:

- Drilling or chipping stone, brick, concrete, paint, pipe coatings or metal.
- Power grinding, buffing or wire brushing.
- Oxy-acetylene welding, heating or cutting. (Use approved eye protection with lens shade 4, 5 or 6).
- Electric Arc Welding. (Use approved welding shield with lens shade 10, 11 or 12).
- Hand drilling or sawing of overhead objects.
- Use of power tools such as drills, saws or sanders.
- Dust or flying particles.
- Handling acids, caustics, chlorines, ammonia or other similar liquids or gases except when approved complete head coverings are worn. Chemical goggles are necessary.
- Brush Chippers, Chain Saws, Weed Eaters, Mowers and any other equipment that flying particles are in the air.

- Any other danger of injury to the eyes or as directed by supervisor or City Policy.
- Any time there is a possibility of electrical flash, safety glasses shall be worn.
- For additional information concerning eye and face protection requirements, refer to OSHA standard 29 CFR 1910.133.

Head Protection (Refer to City of Council Bluffs Personal Protective Equipment Policy)

- Approved hard hats shall be worn by all employees when in areas where falling objects, electrical contact or other hazards may cause head injury.
- Safety head gear and/or head band assembly shall not be defaced or altered in any manner without approval.
- If length or style of hair, beard or mustache may result in injury or an accident, it is the employee's responsibility to provide themselves with means by which the hair may be contained to prevent injury.

Fall Protection

- When an employee is exposed to a fall in excess of six feet and protective measures such as catch platforms, guardrails and safety nets are not practical, the employee shall be protected by the use of fall-arrest equipment or positioning devices such as body harnesses, lanyards, lifelines and rope grabs. When choosing fall-arrest equipment or positioning devices, consideration shall be given to type of work to be performed and limiting the shock load on the body of the wearer in the event of a free fall.
- Employee shall rig fall-arrest equipment so that they cannot free fall more than six feet or contact any lower object. When positioning devices are used, they shall be rigged to limit free fall to two feet. Anchorage points for fall-arrest equipment and positioning devices shall be capable of supporting a shock load and located above the employee's harness attachment point.

- Employees shall avoid the following lanyard snap-hook connections to help eliminate the possibility of accidental disengagement (roll-out):
    - Single-locking snap-hooks
    - Two (or more) snap-hooks connected to on D-ring.
    - Two snap-hooks connected to each other.
    - A snap-hook connected back on it integral lanyard.
    - Improper dimensions of the D-ring, rebar or other connection to the snap-hook dimension.
- When vertical lifelines are used, each employee shall be protected by a separate lifeline. The lifeline shall be properly weighted at the bottom and terminated to preclude a device such as a rope grab from fall off the line.
- Horizontal lifelines shall be limited to two persons at one time between supports.
- Prior to each use, the employee shall visually inspect all fall-arrest equipment and positioning devices for defects. Equipment showing any defect shall be withdrawn from service.
- Employees shall not use fall-arrest equipment or positioning devices until they have been properly trained in their use.
- For additional information on fall-arrest equipment and positioning device requirements, refer to OSHA standards 29 CFR 1926.104 and 29 CFR 1926.501.

Lifting and Carrying, employees shall lift heavy objects in the following manner:

- Keep feet parted, one alongside, one behind the object.
- Keep the back straight, nearly vertical.
- Tuck your chin in.
- Keep body weight directly over the feet.
- An employee shall obtain assistance, or use power equipment, in lifting heavy objects.
- When two or more persons carry a heavy object that is to be lowered or dropped, there shall be a prearranged signal for releasing the load.
- When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried. Employees shall not attempt to lift beyond their capacity. Caution shall be taken when lifting or pulling in an awkward position.

- Employees shall avoid twisting or excessive bending when lifting or setting down loads.
- When moving a load horizontally, employees shall push the load rather than pull it.
- When performing a task that requires repetitive lifting, the load shall be positioned to limit bending and twisting. The use of lift tables, pallets and mechanical devices should be considered.

Hand Safety

- When using such tools as screw drivers and wrenches, employees shall avoid using their wrists in a bent (flexed), extended or twisted position for long periods of time. Employees shall maintain their wrists in a neutral (straight) position.
- When gripping, grasping or lifting an object such as a pipe or board, the whole hand and all the fingers shall be used. Gripping and lifting with just the thumb and index finger shall be avoided.

Exhaust Ventilation

- Exhaust systems, when provided at the work location, shall be used as required.
- When an exhaust system does not provide adequate protection, other protective means, such as an approved respirator, shall be used in addition to the exhaust system.
- For additional information concerning ventilation requirements, refer to OSHA standard 29 CFR 1910.94.

Supplemental Breathing Equipment (Refer to City of Council Bluffs Personal Protective Equipment Policy)

- Employees shall not use respiratory protection equipment until they have been fit tested and trained in the use and limitations of the equipment.
- Approved breathing apparatus shall be used for the following:
  - Entering or working in any confined space or in any environment where an adequate supply of fresh air cannot be assured.

- Sandblasting
- Spray painting in an enclosed space.
- Exposure to any environmental condition that would be unhealthy.

- Respiratory protection equipment shall be cleaned and disinfected by the user before it is stored and put away or issued to another employee.
- For additional information concerning supplemental breathing equipment refer to the City of Council Bluffs respiratory protection policy and OSHA standards 29 CFR 1910.94 and 29 CFR 1910.134.

Excavations, Trenching and Shoring Safety Policy – B-14

City of Council Bluffs Excavations, Trenching and Shoring Safety Policy

Purpose: To provide necessary protection from trenching exposures for City employees as prescribed in Iowa's Occupational Safety and Health Standards for the Construction Industry sections 1926.650 subparts P, A thru E.

Applicability: This policy applies to all City Employees involved in Excavations, Trenching and Shoring.

Scope: All the requirements contained in this section apply to all open excavations made in the earth's surface. Excavations are defined to include trenches.

General Protection Requirements

- Any objects located on or around an excavation site that create a hazard to employees shall be removed or supported as necessary, to safeguard employees.

- 48 hours prior to excavating, every effort shall be made to contact all utility companies in order to determine the location of any underground lines that may exist at the site of excavation. In lieu of contacting all utilities the Iowa One Call program may be used. Their phone number is 1-800-292-8989.

- When excavation operations approach the estimated location of underground installations, the exact location of the installation shall be determined by safe and acceptable means.

- While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.

- A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are four (4) feet or more in depth so as to require no more that fifteen (15) feet of lateral travel for employees.

- Structural ramps utilized by employees for access or egress only, shall be designed by a competent person. If the ramp will be used for access and egress of equipment, as well as employees, the ramp shall be designed by a competent person qualified in structural design.

- Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent displacement.

- Structural members used for ramps and runways shall be or uniform thickness and width.

- Cleats or other appropriate means to connect runway members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

- Structural ramps used in lieu of steps shall be provided with cleats or other surface treatment to prevent slipping.

- Safety vests shall be worn when employees are exposed to traffic.

- No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees are also required to stand away from any vehicle being loaded or unloaded.

- When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, a warning system shall be utilized such as barricades, hand or mechanical signals or stop logs.

- Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees.

- If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to assure proper operation.

- If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation.

- When the stability of adjoining buildings, walls or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

- Employees shall be protected from excavated or other materials that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least two (2) feet from the edge of the excavation, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling into excavations, or by both if necessary.

- Daily inspections of the excavation and adjacent areas shall be made by a competent person. An inspection shall be conducted prior to the start of work and throughout the duration of the job. An inspection shall also be made after every rainstorm or other hazard increasing occurrence.

- When an inspection shows evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, or other hazardous conditions, exposed employees shall be removed from the excavation until the hazard has been eliminated.

- Where employees or equipment are exposed or permitted to cross over excavations, walkways or bridges with standard guardrails shall be utilized.

- Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc.., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary well, pits shafts, etc.., shall be backfilled.

Requirements for Protective Systems

- Each employee in an excavation shall be protected from cave-ins by an adequate protective system outlined below 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 a potential cave-in.

- Protective systems shall have the capacity to resist all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

Design of Sloping and Benching Systems

- The slopes and configurations of sloping and benching systems shall be in accordance with one of the following options:

    - Option 1 – Allowable Configuration and Slopes

    - Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the employer uses one of the other options listed below. Slopes specified in paragraph (b) (1)(i) of this section, shall be excavated to form configurations that are in accordance with the slopes shown for Type C soil in Appendix B of this subpart.

    - Option 2 – Determination of slopes and configurations using Appendices A and B. Maximum allowable slope, and allowable configurations for sloping and benching systems, shall be determined in accordance with the conditions and requirements set forth in appendices A and B to this subpart.

    - Option 3 – Designs using other tabulated data. Designs of sloping or benching systems shall be selected from and in accordance with tabulated data, such as tables and charts. The tabulated data shall be in written form and include all of the following: Identification of the parameters that affect the selection of sloping or benching system drawn from such data, identification of the limits of use of the data, to include the magnitude and configuration of slopes determined to be safe, explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data. At least one copy of the tabulated data which identifies the registered professional engineer, who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of data shall be made available.

    - Designs by a registered professional engineer. Sloping and benching systems not utilizing Option 1 or Option 2 or Option 3 shall be approved by a registered professional Engineer. Designs shall be in written form and shall include at least the following:

- The magnitude of the slopes that were determined to be safe for the particular project; the configurations that were determined to be safe for the particular project; the identity of the registered professional engineer approving the design. At least one copy of the design shall be kept at the jobsite while the slope is being constructed. After that time the design need not be at the jobsite but a copy shall be made available if requested.

Design of Support Systems, Shield Systems and Other Protective Systems

- Option -1-Designs using appendices A, C and D. Designs for timber shoring in trenches shall be determined in accordance with the conditions and requirements set forth in appendices A and C. Designs for aluminum hydraulic shoring shall be in accordance with paragraph (c) (2), but if the manufacturer's tabulated data cannot be utilized, designs shall be in accordance with appendix D.

- Option -2-Designs using Manufacturer's Tabulated Data. Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all the specifications, recommendations, and limitations issued or made by the manufacturer. Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval.

- Option-3-Designs using other tabulated data. Designs of support systems, shield systems or other protective systems shall be selected from and be in accordance with tabulated data, such as tables and charts. The tabulated data shall be in written form and include all of the following: Identification of the parameters that affect the selection of a protective system drawn from such data: Identification of the limits of use of the data; Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from data and at least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite but a copy of the data shall be made available if requested.

- Option -4-Design by a registered professional engineer, support systems,

shield systems and other protective systems not utilizing Option 1, Option 2 or Option 3, above, shall be approved by a registered professional engineer. Designs shall be in written form and shall include the following: A plan indicating the sizes, types and configurations of the materials to be used in the protective system; and the identity of the registered professional engineer approving the design. At least one copy of the design shall be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design shall be made available if requested.

Materials and Equipment

- Materials and equipment shall be free from damage or defects that might impair their proper function. When materials or equipment used for protective systems is damaged, a competent person shall examine the materials or equipment and evaluate its suitability for continued use. If the competent person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for use, then such material or equipment shall be removed from service, and shall be evaluated and approved by a registered professional engineer before being returned to service.

Installation and Removal of Support Systems

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

- Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses or from being struck by members of the support system.

- Individual members of the support systems shall not be subjected to loads exceeding load limits.

- Removal shall begin at, and progress from, the bottom of the excavation. Members shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

- Backfilling shall progress together with the removal of support systems from excavations.

Sloping and Benching Systems

- Employees shall not be permitted to work on the faces of sloped or benched excavations at levels above other employees.

Shield Systems

- Shield systems shall not be subjected to loads exceeding those which the system was designed to withstand.

- Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

- Employees shall be protected from the hazards of cave-ins when entering or exiting the areas protected by shields.

- Employees shall not be allowed in shields when shields are being installed, removed or moved.

City of Council Bluffs Animal Control Safety Policy – B-16

Animal Control is not simply a matter of removing animals from the streets but requires a comprehensive, proactive program, ideally implemented by local government or municipalities. An effective program will aim to encompass:

- Animal Welfare Legislation
- Humane capture and handling of animals
- Providing shelter suitable for the animals needs
- Providing veterinary care
- Spaying/neutering programs
- Humane euthanasia of animals when necessary
- Public education
- Liaison between the government authority and non-government organizations

The Animal Control Officer is central to any effective program and their role will include:

- Humane capture, handling and securing of stray animals
- Enforcing relevant legislation or by laws
- Developing the links between the municipalities and animal welfare organizations, veterinarians and any other relevant agencies.
- Promoting an understanding of dogs and cats and responsible pet ownership.
- Promoting effective stray control management techniques: neutering programs, animal identification and registration.

Dog Behavior

A basic understanding of routine and behavior of animals will ensure that the Animal Control Officer takes action appropriate to a situation.

The category of dog will determine what action is needed. For example, if the major concern is pet dogs loose on the streets, legislation to ensure that owners control their animals, through registration and licensing is enforced with fines.

If the major concern is stray or feral animals then a strategy of capture, vaccination and neutering, before release or finding a home will be required to steadily reduce numbers. In some programs it may be necessary to consider euthanasia.

Feral Dogs

Typically a feral dog is capable of living successfully with little if any assistance and will generally avoid human contact. Some may require hunting skills, but most merely scavenge for food. The feral dog tends to rest during the day and become active in the early morning and at dusk. These traits make potential adoption difficult and only likely to be successful with young animals.

Stray Dogs

Stray dogs maintain social bonds with humans, some may have been born and raised as pets before adopting a free ranging lifestyle. They are very obvious on the streets in many areas and unlike feral dogs, they will be more active throughout the day.

Uncontrolled Pet Dogs

Free ranging pet dogs have an owner, but spend all day on the streets, returning home in the evening.

Animal Capture Safety

Animal Control Officers are required to humanely catch stray animals. To do so, the Animal Control Officer will need to understand how the animal is likely to react.

If it feels threatened, an animal has two basic options, to run or fight-known as flight or fight.

The purpose of both is to increase the distance between themselves and the threat. An animal that believes it cannot escape may become aggressive in an attempt to drive the threat away.

The less familiar an animal is with humans or the more afraid or excited, the sooner it will attempt to escape. This is known as the “flight zone”. The bigger the flight zone, the harder the task is for an approaching Animal Control Officer.

Approaching an Animal

The animal will regard you as a threat and be suspicious, so before approaching an animal, stand back and discreetly observe what he is doing, try to read his body language, is he likely to run or stand his ground. Remember, while you are assessing him, he is assessing you.

Avoid eye contact, instead, keep your eyes averted, many animals assume that if you are not staring directly at them, you are not interested and feel safe.

Your body posture should be unthreatening. Let your body relax, your shoulder droop and avoid threatening gestures such as a raised arm. As you get closer, you can reduce your size and threat by crouching down.

Speak in a low, calm and friendly way to try and reassure the animal.

Move slowly, and avoid a direct approach, instead edge forwards with small sideways steps.

If you see any reaction, stop and reassess the situation. Try to predict where the animal might run. It is possible to shepherd him into an enclosure such as a yard which may make capture easier. Try to entice the dog towards you with food. An animal approaching you will be calmer and easier to slip on a leash.

If the animal takes flight, do not chase him, but remain calm and still attempt to see where he has gone. Pursuit will make the animal more and more frightened and in he may simply take flight at the slightest approach. Better to let the animal believe there was no serious threat.

- Before approaching assess the situation
- Remember the animals flight zone
- Observe the animal without eye contact
- Remain calm
- Do not walk directly towards the animal
- Stop when animal becomes agitated
- Stoop down, lower your body posture
- Entice the animal towards you with food
- Attempt to restrain the animal with a slip leash
- Do not chase if an animal takes flight

Animal Control Equipment

The equipment we will look at here has been found to be effective and humane. From the animal's point of view, capture is always stressful, so any person engaged in animal control must attempt to minimize this stress. Most stray dogs are dangerous if handled correctly, although they may become aggressive if handled incorrectly. Dogs used for fighting, such as the Pit Bull, which becomes stray, should always be treated with extra caution using equipment and clothing specially designed for the handler's safety.

Slip Leashes

Slip leashes can be simply made from rope or cord, made into a running noose that can be slipped around the dogs neck and used to restrain the animals.

Catch Poles/Control Sticks/Graspers

This is an adjustable noose on the end of a pole for handling aggressive or difficult animals, also those whose temperament is unknown.

Catch poles can be purchased ready make from specialist suppliers or homemade. The adjustable loop is slipped over the animal's head and around its neck, then use the pole to keep the animal at arm's length while you walk it to a secure cage. Be careful not to strangle the animal, if the tongue appears blue in color, slacken off.

Hand Held Snares

Not suitable for permanently restraining a dangerous animal. This consists of a flexible pole, either inserted into a rope made up from a pole with a cable attached to the end. On the free end of the cable is a small loop which is allowed to slide along the rod. The loop is slid towards the hand holding the end of the rod, and held there by the thumb. This forms a large arc, or bow, which can be swept over an elusive animal's head or body. By releasing the loop, the bow straightens and animal is secured. This device is marketed under the name of "Snappy Snares".

Traps

Animals can be captured, unharmed, using a cage trap, baited with food. These can be purchased from specialist suppliers. When any traps are set, they should be checked frequently to ensure that only target animals are caught or that animals are not left in them longer than necessary.

As part of an ongoing animal control program, controlled food sources can become part of the catch program. For example, garbage areas can be secured with high fencing, with access restricted to one or two entrances which can be secured at night. However, small trap entrances can be left for dogs which once inside will be unable to escape.

Throw Nets

The throw net consists of a net usually about 3 feet by 3 feet with a weighted rim cord to help with throwing and is used to capture medium sized dogs, cats and small animals. Once an animal is netted, it must be carefully released and restrained with either the slip leash or catchpole.

Hoop Nets

They are used in a similar manner as the throw net, but in the hands of a skillful operator, can be used for securing small animals when they are on the run as the nets can be thrown a considerable distance. The nets consist of a circle of aluminum tubing with a diameter of about 3 feet and attached to this is netting which forms a bag about 18 inches deep.

Walk Toward Nets

They are designed for cordoning off open areas to prevent an animal, usually a dog, from escaping. The net is stretched taunt between two people to form a barrier and then walked towards the dog. Most nets have a support pole at either end and fully extended measure about 15 feet with a height of about 5 feet. It is useful in securing street dogs that have taken shelter underneath parked vehicles. Once confined the animal is secured by catchpoles or leashes.

Chemical Capture

Chemical capture involves drugging animals prior to capture. The drug is injected using a syringe in the form of a dart fired by blowpipe or dart gun. A high level of skill is required to assess the weight of the animal, ensure the correct drug dosage and the Animal Control Officer must be an accurate shot.

Animals do not drop immediately after being hit by a dart, therefore someone must track and restrain the animal. A mixture of the drugs ketamine hydrochloride and xylazine are generally used in animal control work. These are not readily available and their use may not be permitted by non-veterinarians.

Chemical capture can play a role in animal control, but is not readily recommended. Only in exceptional situations should this method be used. It is important for Animal Control Officers to develop handling skill to enhance their status in society by demonstrating humane techniques.

Muzzles

Muzzles to prevent a dog from biting other dogs or people are available in different sizes as either a cage or basket to cover the jaws, or a strap of tough webbing that slides over the muzzle.

Gloves

Thick leather gloves can be used, purpose made animal handling gloves are suitable when working with different species of animals, for example the bit of a cat is more piercing than the bite of a dog which has more of a crushing effect.

Transportation

Once an animal is caught, it will need to be moved to a secure location. To do this safely requires a variety of cage sizes and a vehicle to transport them. Docile dogs can be secured in the back of a van. Dogs that have been aggressive during capture must be restrained in a cage. The cage should be positioned on the ground prior to capture to ensure the dog can be easily put in the cage as soon as it is captured. If a catchpole is used, the animal is released as soon as it is placed in the cage. Whenever possible the cages should be fitted with lifting handles.

If a dog has been caught in a trap, it should be transported in the trap and not released until it is inside the holding facility. Different sizes of cages are required for different animals. Ideally the flooring of the cage should be solid and removable for ease of cleaning.

Hygiene

Good hygiene is very important to prevent and control the spread of disease between animals and also animals to man. Important things to consider are:

- Remove all urine and feces as soon as practicable and dispose of it properly. Both are a potential source of infection to other animal and people.
- Kennels, cages and vehicles used should be cleaned thoroughly at the end of each day.
- Before the use of disinfectants, wash with warm water and detergent first.
- Ensure disinfectants are used in the correct solutions.
- If a disinfectant is not available, bleach diluted in water can be used. Areas so treated should be rinsed in fresh water and left to dry.
- Wash your hands after handling any animals and again before eating food.
- If possible wear disposable rubber gloves when handling an animal with obvious skin problems.
- It is important to ensure your rabies vaccinations are kept up to date. If bitten by a dog, whether you are vaccinated or not, consult a doctor immediately.
- It is important to ensure your tetanus vaccinations are kept up to date. If a wound such as a dog bite becomes infected with the organism, it could lead to tetanus.

Exotic Animal Safety

If an Animal Control Officer is in a situation that you are dealing with an exotic animal such as a Tiger, Lion, Boa Constrictor, Elephant, Poisonous Snake or any animal that you are not sure of how to handle and capture, contact someone who would be able to answer questions and provide help in this situation. I would recommend the Henry Doorly Zoo as a contact for advice, help and resources in this situation.

City of Council Bluffs Weather Related and Working Outdoors Safety Policies – B-17

Hot Weather: Heat illness includes a range of disorders that result when your body is exposed to more heat than it can handle. The human body is constantly engaged in a life and death struggle to disperse the heat that it produces. If allowed to accumulate, the heat would quickly increase your body temperature beyond its comfortable 98.6 degrees F.

Who is at Risk? Heat related illness can affect anyone not used to hot weather, especially when it combined with high humidity.

Those especially at risk:

- Infants, young children, elderly and pets
- Individuals with heart or circulatory problems or other long term illness
- Athletes and people who like to exercise (especially beginners)
- Individuals taking certain medications that altar sweat production
- Alcoholics and drug users
- Employees working in the heat

Heatstroke

Heatstroke is the most serious and life threatening heat related illness. In certain circumstances, your body can build up too much heat, your temperature may rise to life threatening levels, and you can become delirious or lose consciousness. If you do not rid your body of excess heat fast enough, it "cooks" the brain and other vital organs. It is often fatal, and those who do survive may have permanent damage to their vital organs.

Symptoms of Heatstroke

- The victim's body feels extremely hot when touched.
- Altered mental status (behavior) ranging from slight confusion and disorientation to coma.
- Conscious victims usually become irrational, agitated, or even aggressive and may have seizures.
- In severe heatstroke, the can go into a coma in less than one hour. The longer the coma lasts, the lower the chance of survival.

What To Do

- Move the person to a half sitting position in the shade.
- Call for emergency medical help immediately.
- If humidity is below 75**%,** spray the victim with water and vigorously fan. If humidity if above 75%, apply ice packs on neck, armpit or groin.

Heat Exhaustion B-17

Heat exhaustion is characterized by heavy perspiration with normal or slightly above normal body temperatures. It is caused by water or salt depletion or both (severe dehydration). Heat exhaustion affects workers and athletes who do not drink enough fluids while working or exercising in hot environments.

Symptoms of Heat Exhaustion Include

- Severe thirst, fatigue, headache, nausea, vomiting and sometimes diarrhea.
- Uncontrolled heat exhaustion can evolve into heatstroke.
- Profuse sweating
- Clammy or pale skin
- Dizziness
- Rapid pulse
- Normal or slightly above normal body temperature
- The affecter person often mistakenly believes he or she has the flu.

What To Do

- Sit or lie down in the shade
- Drink cool, lightly salted water or sports drink
- If persistent, gently apply wet towels and call for emergency medical help

Heat Cramps

Heat cramps are painful muscular spasms that happen suddenly affecting legs or abdominal muscles. They usually happen after physical activity in people who sweat a lot or have not had enough fluids. Victims may be drinking water without adequate salt content.

What To Do

- Sit or lie down in the shade
- Drink cool, slightly salted water or sports drink
- Stretch affected muscles

Preventing Heat Illness

Heat illnesses are avoidable. With knowledge, preparation, fluid replacement and prompt emergency care, there is no need for heat illness to affect people working in warm weather.

Follow these guidelines: Keep as cool as possible, avoid dehydration (drink 8 oz. of water every 20 minutes), wear appropriate clothing, rest frequently and avoid alcohol and caffeine.

Other Heat Related Illnesses

Heat Syncope, in which a person becomes dizzy or faints after exposure to high temperatures. What to do: lie down in a cool place, if not nauseated drink water, check for injuries (if victim fell), seek medical attention if there is not a full recovery.

Heat Edema causes the feet or ankles to swell from heat exposure. It is more common in women not acclimated to a hot climate. It is related to salt and water retention and tends to disappear after acclimation. What to do: wear support stockings and elevate legs.

Heat Rash is an itchy rash that develops because or unevaporated moisture on skin wet from sweating. What to do, dry and cool the skin.

Cold Weather: Prolonged exposure to low temperatures, wind and/or moisture can result in cold related injury from frostbite and hypothermia. Here are some suggestions on how to keep warm and avoid frostbite and hypothermia.

Dress Properly: Wear several layers of loose fitting clothing to insulate your body by trapping warm, dry air inside. Loosely woven cotton and wool clothes best trap air and resist dampness. The head and neck lose heat faster than any other part of the body. Your cheeks, ears and nose are the most prone to frostbite. Wear a hat, scarf and turtleneck sweater to protect these areas.

Frostbite, what to look for: The extent of frostbite is difficult to judge until hours after thawing. There are two classifications of frostbite:

- Superficial frostbite is characterized by white, waxy or grayish yellow patches on the affected areas. The skin feels cold and numb. The skin surface feels stiff and underlying tissue feels soft when depressed.
- Deep frostbite is characterized by waxy and pale skin. The affected parts feel cold, hard and solid and cannot be depressed. Large blisters may appear after warming.

What To Do

- Get the victim out of the cold and to a warm place immediately
- Remove any constrictive clothing items that could impair circulation If you notice signs of frostbite, seek medical attention immediately
- Place dry, sterile gauze between toes and fingers to absorb moisture and to keep them from sticking together
- Slightly elevate the affected part to reduce pain and swelling

- If you are more than one hour from a medical facility and you have warm water, place the frostbitten part in the water (102 to 106 degrees F.). If you do not have a thermometer, test the water first to see if it is warm, not hot. Rewarming unusually takes 20 to 40 minutes or until tissues soften.

What Not To Do

- Do not use water hotter the 106 degrees F.
- Do not use water colder the 100 degrees F. since it will not thaw frostbite fast enough
- Do not rub or massage the frostbite area
- Do not rub with ice or snow

Hypothermia

Hypothermia occurs when the body loses more heat that it produces. Symptoms include change in mental status, uncontrollable shivering, cool abdomen and a low core body temperature. Severe hypothermia may cause rigid muscles, dark and puffy skin, irregular heartbeat and respiration and unconsciousness.

Treat hypothermia by protecting the victim from further heat loss and seeking immediate medical attention. Get the victim out of the cold. Add insulation such as blankets, pillows, towels or newspapers beneath and around the victim. Be sure to cover the victim's head. Replace wet clothing with dry clothing. Handle the victim gently because rough handling can cause cardiac arrest. Keep the victim in a horizontal (flat) position.

The best way to avoid frostbite and hypothermia is to stay out of the cold. That is not always possible. Remember to dress properly and watch for signs of frostbite and hyperthermia.

Thunderstorms and Lightning

Familiarize yourself with these terms to help identify a thunderstorm hazard:

- Severe Thunderstorm Watch: Tells you when and where severe thunderstorms are likely to occur. Watch the sky and stay tuned to a NOAA Weather Radio, commercial radio or television for information.
- Severe Thunderstorm Warning: Issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm.

All thunderstorms are dangerous. Every thunderstorm produces lightning. In the United States, an average of 300 people are injured and 80 people are killed each year by lightning. Although most lightning victims survive, people struck by lightning often report a variety of long term, debilitating symptoms. Other dangers of thunderstorms include tornadoes, strong winds, hail and flash flooding. Flash flooding is responsible for more fatalities, more the 140 annually, than any other thunderstorm associated hazard.

Facts About Thunderstorms

- They occur singly, in clusters or in lines.
- Some of the most severe occur when a single thunderstorm affects one location for an extended time.
- Thunderstorms typically produce heavy rain for a brief period, anywhere from 3 minutes to an hour.
- Warm humid conditions are highly favorable for thunderstorm development.
- About 10 percent of thunderstorms are classified as severe, one that produces hail at least three quarters of an inch in diameter, has winds of 58 miles per hour or higher or produces a tornado.

Facts About Lightning

- Lightning's unpredictability increases the risk to individuals and property.
- Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.
- "Heat Lightning" is actually lightning from a thunderstorm too far away for thunder to be heard. However, the storm may be moving in your direction.
- Most lightning deaths and injuries occur when people are caught outdoors in the summer months during the afternoon and evening.
- Your chances of being struck by lightning are estimated to be 1 in 600,000, but could be reduced even further by following safety precautions.
- Lightning strike victims carry no electrical charge and should be attended to immediately.

What to do Before a Thunderstorm

- Remember the 30/30 lightning safety rule: Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.
- Postpone outdoor activities.
- Get inside a home, building or hard top automobile (not a convertible). Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.

- Remember, rubber soled shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard topped vehicle provides increased protection if you are not touching metal.
- Secure outdoor objects that could blow away or cause damage.
- Shutter windows and secure outside doors. If shutters are not available, close window blinds, shades or curtains.
- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Use a corded telephone only for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.
- Use your battery operated NOAA Weather Radio for updates on the weather.

Avoid the following

- Natural Lightning Rods such as a tall, isolated tree in an open area.
- Hilltops, open fields, the beach or a boat on the water.
- Isolated sheds or other small structures in open areas.
- Anything metal, tractors, farm equipment, motorcycles, golf carts, golf clubs and bicycles.

What To Do During A Thunderstorm

- If you are in a forest, seek shelter in a low area under a thick growth of small trees.
- If you are in an open area, go to a low place such as a ravine or valley, be alert for flash floods.
- If you are on open waters, get to land and find shelter immediately.
- If you are anywhere and you feel your hair stand on end (which indicates that lightning is about to strike), squat down to the ground on the balls of your feet. Place your hands over your ears and head between your knees. Make yourself the smallest target possible and minimize your contact to the ground. DO NOT lie flat on the ground.

Tornados

Familiarize yourself with these terms to help identify a tornado hazard:

- **Tornado Watch:** Tornados are possible. Remain alert for approaching storms. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio or television for information.

- **Tornado Warning:** A tornado has been sighted or indicated by weather radar. Take shelter immediately.

What to do Before a Tornado

Be alert to changing weather conditions

- Listen to NOAA Weather Radio or to commercial radio or television newscasts for the latest information.
- Look for approaching storms.
- Look for the following danger signs:
  - Dark, often greenish sky
  - Large hail
  - A large, dark, low lying cloud (particularly if rotating)
  - Loud roar, similar to a freight train
- If you see approaching storms or any of the danger signs, be prepared to take shelter immediately.

What to do During a Tornado

- If you are in a structure (e.g. residence, small building, school, nursing home, hospital, factory, shopping center, high rise building, etc.) go to a pre-designated shelter area such as a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest level (closet, interior hallway) away from corners, windows doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck. Do not open windows.
- If you are in a vehicle, truck, trailer or mobile home, get out immediately and go to the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornados.
- If you are outside with no shelter lie flat in a nearby ditch or depression and cover your head with your hands. Be aware of potential flooding. Do not get under an overpass or bridge. You are safer in a low, flat location.
- Never try to outrun a tornado in urban or congested areas in a car or truck. Instead leave the vehicle immediately for safe shelter.
- Watch out for flying debris. Flying debris from tornadoes causes most fatalities and injuries.

Winter Storms

- Each year, dozens of Americans die due to exposure to cold. Add to that number, vehicle accidents and fatalities, fire due to dangerous use of heaters and other weather fatalities and you have a significant threat.
- Threats, such as hypothermia and frostbite, can lead to loss of fingers and toes or cause permanent kidney, pancreas and liver injury and even death.

- You must prepare properly to avoid these extreme dangers. You also need to know what to do if you see symptoms of these threats.
- A major winter storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall and cold temperatures.
- People can become trapped at home or in a car, without utilities or other assistance.
- Attempting to walk for help in a winter storm can be a deadly decision.
- The aftermath of a winter storm can have an impact on a community or region for days, weeks or even months.
- Extremely cold temperatures and heavy snow can cause hazardous conditions and hidden problems.

Heavy Snow

Heavy snow can immobilize a region and paralyze a city, stranding commuters, closing airports, stopping the flow of supplies and disrupting emergency and medical services. Accumulations of snow can cause roofs to collapse and knock down trees and power lines. Homes and farms may be isolated for days and unprotected livestock may be lost. In the mountains, heavy snow can lead to avalanches. The cost of snow removal, repairing damages and the loss of business can have severe economic impacts on cities and towns.

- **Blizzard:** Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for at least 3 hours.
- **Blowing Snow:** Wind driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- **Snow Squalls:** Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- **Snow Showers:** Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- **Snow Flurries:** Light snow falling for short durations with little or no accumulation.

Injuries Due to Ice and Snow

- About 70% result from vehicle accidents
- About 25% occur in people caught out in a storm
- Most happen to males over 40 years of age

Ice

Heavy accumulation of ice can bring down trees and topple utility poles and communication towers. Ice can disrupt communications and power for days while utility companies repair extensive damage. Even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.

- **Rain:** Frozen precipitation melts into rain
- **Freezing Rain:** Frozen precipitation melts with warm air, rain falls and freezes on cold surfaces as a sheet of ice
- **Sleet:** Frozen precipitation melts, refreezes into sleet before hitting the ground
- **Snow:** Snow fall into cold air never melts

Cold

Wind Chill: Wind chill is not the actual temperature but rather how wind and cold feel on exposed skin. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature. Animals are also affected by wind chill; however, cars, plants and other objects are not.

Injuries Related to Cold:

- 50% happen to people over 60 years old
- More than 75% happen to males
- About 20% occur at home

Stay Informed, What to Listen For: The National Weather Service issues outlooks, watches, warnings and advisories for all winter weather hazards. Here's what they mean.

- **Outlook:** Winter storm conditions are possible in the next 2-5 days. Stay tuned to local media for updates.
- **Watch:** Winter storm conditions are possible within the next 36-48 hours. Prepare now.
- **Warning:** Life threatening severe winter conditions have begun or will begin within 24 hours. Act now!
- **Advisory:** Winter weather conditions are expected to cause significant inconveniences and may be hazardous. If you are cautious these situation should not be life threatening.

Dress for the Season: Wear loose, lightweight, warm clothes in layers. Trapped air insulates. Remove layers to avoid perspiration and subsequent chill. Outer garments should be tightly woven, water repellent and hooded. Wear a hat, half your body heat loss can be from the head. Cover your mouth to protect your lungs from extreme cold. Mittens, snug at the wrist, are better than gloves. Try to stay dry.

When Caught in a Winter Storm in a Vehicle

- Stay in vehicle
- You will become quickly disoriented in wind driven snow and cold
- Run the motor about 10 minutes each hour for heat
- Open the window a little for fresh air to avoid carbon monoxide poisoning
- Make sure the exhaust pipe is not blocked
- Be visible to rescuers
- Turn on the dome light at night when running the engine
- Tie a colored cloth, preferable red, to your antenna or door
- After snow stops falling, raise the hood to indicate you need help
- From time to time, move arms, legs, fingers and toes vigorously to keep blood circulating and to keep warm

Avoid Overexertion, such as shoveling heavy snow, pushing a car or walking in deep snow. The strain from the cold and the hard labor may cause a heart attack. Sweating could lead to a chill and hypothermia.

Rodents, Snakes and Insects

Insects, Spiders and Ticks

- To protect yourself from biting and stinging insects, wear long pants, socks and long sleeved shirts.
- Use Insect repellents that contain DEET or Picaridin.
- Treat bites and stings with over the counter products that relieve pain and prevent infection.
- Avoid fire ants; their bites are painful and cause blisters.
- Severe reactions to fire ant bites, bees, wasps (chest pain, nausea, speech) require immediate medical attention.

Rodents and Wild or Stray Animals

- Dead or live animals can spread diseases such as Rat Bite Fever and Rabies.
- Avoid contact with wild or stray animals.
- Avoid contact with rats or rat contaminated buildings. If you can't avoid contact, wear protective gloves and wash your hands regularly.
- Get rid of dead animals as soon as possible.
- If bitten or scratched, get medical attention immediately.

Snakes

- Watch where you place your hands and feet when removing debris. If possible, don't place your fingers under debris you are moving. Wear heavy gloves.
- If you see a snake, step back and allow it to proceed.
- Wear boots at least 10 inches high.
- Watch for snakes sunning on fallen trees, limbs or other debris.
- A snake's striking distance is about ½ the total length of the snake.
- If bitten, note the color and shape of the snake's head to help with treatment.
- Keep bite victims still and calm to slow the spread of venom in case the snake is poisonous. Seek medical attention as soon as possible.
- Do not cut the wound or attempt to suck out the venom. Apply first aid: lay the person down so that the bite is below the level of the heart and cover the bite with a clean, dry dressing.

Poison Ivy, Poison Oak and Poison Sumac

Employees should take precautions when working in and around wooded areas and in heavy foliage, because they may come in contact with poison ivy, oak and sumac. Approximately 90% of Americans are allergic to these plants that cause a bothersome rash with intense itching. Touching the stems, roots or leaves of these plants results in direct contact of skin with urushiol oil, which causes the itching. The cause of the rash, blisters and infamous itch is from the exposure to urushiol, a chemical in the sap of poison ivy, oak and sumac plants. Because urushiol is inside the plant, brushing against an intact plant will not cause a reaction. But undamaged plants are rare. Urushiol can stick to tools, shoes, clothes or anything. Just touching them could cause a reaction in a susceptible person.

Sensitivity to urushiol can develop at any time. Almost all parts of the body are vulnerable to the sticky urushiol. Urushiol must penetrate the skin to cause a reaction.

Urushiol Oil is Potent: Urushiol oil is potent and it only takes a small amount to cause an allergic reaction.

- Only 1 nanogram (billionth of a gram) is needed to cause a rash.
- The average person is exposed to 100 nanograms per exposure.
- ¼ Ounce of urushiol is all that is needed to cause a rash in every person on earth.
- 500 people could itch from the amount covering the head of a pin.
- Specimens of urushiol several centuries old have been found to cause dermatitis in sensitive people.
- 1 to 5 years is normal for urushiol oil to stay active on any surface including dead plants.
- The name urushiol is derived from urushi, Japanese name for lacquer.

Myths and Facts about Poison Ivy, Oak and Sumac

"Poison Ivy rash is contagious. " Rubbing the rash won't spread poison ivy to other parts of your body or to another person. You spread the rash only if urushiol oil, the sticky, resin like substance that causes the rash, has been left on your hands.

"You can catch poison ivy simply by being near the plants." Direct contact with the plants is needed to release urushiol oil. Stay away from forest fires, direct burning and lawnmowers and trimmers when they are being used because they can cause the urushiol oil to become airborne.

"Leaves of three, let them be." Poison sumac has 7 to 13 leaves on a branch, although poison ivy and oak have 3 leaves per cluster.

"Do not worry about dead plants." Urushiol oil stays active on any surface, including dead plants, for up to 5 years.

"Breaking the blisters releases urushiol oil that can spread." Not true. However wounds can become infected and make the scarring worse. In very extreme cases, excessive fluid may need to be withdrawn by a doctor.

"I've been in poison ivy many times and never broken out, I'm immune." Not necessarily true. The more times a person is exposed to urushiol, the more likely they will break out with an allergic reaction. For the first time sufferer, it generally takes longer for the rash to show up, generally in 7 to 10 days.

Quick Action Needed: Because urushiol can penetrate the skin within minutes, do not waste time if exposed. The faster the victim's skin is cleansed, the greater the chance of removing the urushiol before it gets attached to the skin. Cleansing may not stop the initial outbreak of the rash if more than 10 minutes has passed, but it can help prevent further spread.

If exposed to poison ivy, oak or sumac, if possible, stay indoors until the following steps are completed:

- Cleanse exposed skin with generous amounts of rubbing alcohol. (Don't return to the woods or yard the same day. Alcohol removes your skin's protection along with the urushiol and any new contact will cause the urushiol to penetrate twice as fast.)
- Wash exposed skin with water. (Water temperature does not matter; if you are outside, its likely only cold water will be available.)
- Take a shower with soap and warm water. Do not use soap before this point because soap tends to pick up some of the urushiol from the surface of the skin and move it around.
- Clothes, shoes, tools and anything else that may have been in contact with the urushiol should be wiped off with alcohol and water. Wear gloves or cover hands while completing the steps and then discard the hand covering.

Dealing with the Rash

If the victim doesn't cleanse quickly enough, or the skin is so sensitive that cleansing didn't help, redness and swelling may appear in about 12 to 48 hours. Blisters and itching will follow. For those people who react after their very first exposure, the rash appears after 7 to 10 days. Because they don't contain urushiol, the oozing blisters are not contagious nor can the fluid cause further spread on the affected person's body.

Nevertheless, scratching the blisters with the fingernails that may carry germs could cause an infection.

The rash will only occur where urushiol has touched the skin; it doesn't spread throughout the body. However the rash may seem to spread if it appears over time instead of all at once. This is either because the urushiol is absorbed at different rates in different parts of the body or because or repeated exposure to contaminated objects or urushiol trapped under the fingernails.

The rash, blisters and itch normally disappear in 14 to 20 days without treatment. But few can handle the itch without some relief. For mild cases, wet compresses, or soaking in cool water may be effective. Oral antihistamines can also relieve itching. Hydrocortisone creams or sprays reduce the inflammation, swelling and itching pf poison ivy rashes. They should be used four times a day for best effect. Lotions containing calamine, zinc acetate and alcohol dry the blistered rash quickly and can speed healing.

Antihistamines are available as topical (cream, lotion, or spray) or oral. The oral forms are probably more effective, but can cause drowsiness. Topical antihistamines are less effective and can cause a rash on their own in some people.

Signs of an Emergency

About 15 percent of the 120 Million Americans who are allergic to poison ivy, oak and sumac are so highly sensitive to the plants that they break out in a rash and begin to swell in 4 to 12 hours instead of the normal 24 to 48 hours. Their eyes may swell shut and blisters may erupt on their skin. This is an emergency. Call 911 and get them to a hospital as soon as possible.

Practice Safety

It is recommended that when working in wooded areas and in heavy foliage, that workers wear long pants, long sleeves, boots and plastic under cotton gloves for protection. Remember to practice safety, don't learn by accident. Do everything you can to avoid Poison Ivy, Poison Oak and Poison Sumac, learn what they look like and use extreme caution when you come near them.

City of Council Bluffs Specialized Equipment Safety Policies – B-18

Specialized Equipment (refer to Vehicle Operations for further information)

Front End Loaders

- Lower the bucket to the ground before dismounting the machine.
- Keep all four wheels on the ground at all times. Avoid inclines whenever possible.
- Keep the bucket low when moving, especially with a loaded bucket.
- Do not dig from vertical banks higher than the loader's reach.
- Stay away from bank edges where the footing is soft or where the bank could collapse.
- Do not make sudden stops with a raised or loaded bucket.
- Before dismounting, set park brake with transmission in neutral.
- Safety bar must be in place before an employee may enter the pinch point of an articulating unit.

Backhoes

- Do not operate the control levers while standing on the ground.
- While operating, the stabilizers shall be in the down position. Where possible, the loader bucket shall also be lowered.
- Retract the stabilizer and bucket before transporting the backhoe.
- Do not swing the bucket over personnel or vehicle cabs when loading.
- Be aware of the possibility of underground fiber optic cables and all overhead and underground utility lines.

Trailers and Trailering

- Trailer jack stands and tongues shall be in sound working condition.
- Trailer ramps and deck shall be kept free of mud or other slick elements and shall be in sound working condition.
- Trailers shall be securely attached to the towing vehicle with both hitch and safety chains.
- Taillight hookups shall be used.
- When transporting equipment, be especially cautious of low clearances.

- Material or equipment being trailered shall be secured with chains, chain tensioners, ropes and/or other securing methods.
- Reduce speed when trailering, especially over rough areas such as railroad tracks.
- Be certain that vehicle wheels are squarely on the ramps and that the trailer is secured in place.
- Block trailer wheels before disconnecting and parking to avoid unexpected rolling or movement.
- When backing up to a trailer, do not put your body in a position where it may be pinned between vehicles. Get another employee to work with the truck driver in backing-up and hooking-up procedures. Keep feet clear, should the trailer tongue drop by accident.

Motor Grader

- Operator shall remain seated while operating the grader. Never run a grader standing up.
- When plowing snow, keep the mold board laid forward.
- When the moldboard is side-shifted for blade replacement or other servicing, the blade shall be blocked. Blade replacement is a job requiring two people.
- Use extra caution when backing, get out and look behind before backing or get a spotter to aid in a situation where one needs to back-up.
- Be constantly aware of potential hazards. High manholes, curbs and other unseen items are proven hazards.
- Use steps and grab bars for entry and exit.
- Lower raised equipment when the machine is not in use.

Dump Trucks

- A spotter shall be used whenever possible when backing a truck, if no spotter is available, the driver must exit the truck and look behind the truck for anything that could be a potential problem.
- Trucks shall stand at a loading position so that the loading machine does not swing over the cab of the truck.
- Dump trucks shall not be driven with the dump box raised unless it is a required part of the job at hand. All dump bodies shall have body props.
- Make certain that the end gate is released when dumping to avoid upending.

- Make certain that the end gate is locked when hauling material.
- Rocking a truck to loosen its load is dangerous and hard on equipment.
- When entering or exiting a dump truck, use hand holds and steps. Use care not to strike your head on the cab guard overhanging the cab.
- Never coast or drive a truck out of gear.
- Material being hauled shall be covered so as not to blow or fall out of the dump truck.
- Never stand in the area under a raised dump box unless it is propped or blocked.
- When parking, the unit shall be left in gear with the park brake set. Automatics shall be left in park with the park brake set.
- Use extreme caution when changing lanes or any other driving activity which may involve the unit's blind spot.

Ladder Safety

- No more than one person is allowed on a ladder at one time.
- Each day ladders are used, all ladders should be inspected for loose or defective rungs, broken rivets, cracked welds or other dangerous conditions. Workers should notify the supervisor of all unsafe conditions.
- Ladders should be equipped with non-slipping safety feet.
- A ladder shall not be placed in front of a doorway unless the door is locked, blocked or guarded.
- A stepladder should not be used as a straight ladder. Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height.
- After using a ladder, it shall be stored so that it will not fall.
- Ladders must not be painted as painting could hide structural defects.
- Never work higher than the third rung on a straight ladder and higher than the second step from the top of a step ladder.

Fork Lifts

- Employees shall be instructed in the proper use and care of a forklift before using. Supervisor shall authorize persons who are trained in their use to operate them.
- When picking up a load, forks shall be set squarely and placed under the load as far as possible. Loaded or empty, forks shall be carried as low as possible, but high enough to clear uneven surfaces.
- All loads shall be securely fastened or safely positioned to prevent tipping or falling.
- Only attachment provided by or approved of by the manufacturer may be used: all attachments shall be properly secured.
- The operator shall always operate forklift with clear vision in direction of travel.

- The operator shall always face in the direction of travel.
- Sudden stops shall be avoided.
- On inclines, all types of loaded lift trucks shall be driven with the load on the upgrade side of the driver whether ascending or descending.

Snow Removal

Material Spreading

- Since material spreaders are usually the first units out in a snow situation, extreme care shall be used by the operator while driving on untreated roadways.
- Never allow the spread width be large enough to allow material to strike passing cars or pedestrians.
- Allow extra time for stopping, starting and turning a loaded spreader. When cornering, bear in mind that spreaders tend to be top-heavy and susceptible to tip over.
- Keep frozen chunks of material cleaned off the spreader grades.
- Disconnect power to the spinner before attempting to unplug a spinner chute or material gate. Never use hands or feet to unplug a spinner chute or material gate. Use a shovel, bar or other tool.

Truck Plow Operations

- Plow teams shall work closely together, but not so close so as to increase the likelihood of an accident.
- Be on the alert for unseen hazards such as high manholes.
- Watch for more obvious problems such as traffic, parked or stalled vehicles and mailboxes.
- Never pass over railroad tracks with the blade lowered.
- Due to the oversized nature of the plow blade, be especially careful when passing between parked cars and using garage doors to leave or enter.
- Plows shall never be chained in such a manner so as to interfere with the tripping action of the blade assembly.
- Snow plows shall be driven at safe speeds.

Truck Plow Maintenance

- When changing plow blades or working on plows, prop or jack stand the plow frame and place blocks of wood in the area under the plow blade.

- All plow and plow frame components shall be checked for rust, damage or missing bolts before leaving the yard.
- Do not attempt to change a plow blade, mount or dismount a plow alone, get help.

Snow Blowers

- Keep all personnel away from the front of the blower while the machine is in operation.
- Be prepared to shut auger off should contact be made with a foreign or solid object.
- Should the blower become plugged, power to the augers shall be shut down before clearing or working on them.
- Never aim snow where injury to persons or property is likely.
- Operations shall use good judgment in maintaining a safe distance between the blower and trucks being loaded.
- Loader-mounted snow blowers are front heavy. Use caution when in transit.
- Caution shall be used in regard to height clearance when the discharge chute is extended, especially when entering or exiting garages.
- Blower operators shall avoid overloading trucks to a point where the material will fall off when the truck is in transit.
- Use strobe lights and flashers at all times when snow blowing operations are in progress.

Snow Dump Trucks

- Drivers shall take care to provide adequate clearance between the dump truck and the blower.
- When being loaded, the operator shall remain in the cab and keep windows rolled up.
- Never stand between the end gate and the box while the box is raised to check the load after dumping.
- Stay in the cab when the box is being lowered.
- Dump truck drivers shall maintain a position that will cause the least disruption to traffic flow while waiting to be loaded.
- Use strobe lights and flashers while occupying a through traffic lane when being loaded.

Backing

- Whenever possible, the vehicle shall be positioned to avoid the necessity of backing at a later time.
- Extreme caution shall be exercised when backing a vehicle, to avoid injury to persons and to prevent property damage. Another employee, if present, shall be stationed at the rear of the vehicle to assist the driver in backing the vehicle safely. If a spotter is not available, the driver should exit the truck and look to see what is behind the truck or other vehicle.
- When backing a vehicle, which has an obstructed view to the rear, take the following precautions:
    - ✓ A reverse signal audible above the surrounding noise level shall be used.
    - ✓ An observer shall signal that it is safe to back.
    - ✓ Back slowly.
    - ✓ Watch both sides, but do not depend entirely on mirrors.
    - ✓ In difficult backing situations, enlist the help of another person on the ground as a guide, when such help is available.
    - ✓ When no help is available, get out of the truck and look behind the vehicle for any obstructions, people or other vehicles.

Towing Guidelines (Wrecker Use)

- Towing of disabled units for more than a short distance shall be done only under the supervision of authorized mechanical personnel, especially in situations where the wrecker truck is not used and where brake failure is a factor.
- Only authorized personnel may operate the tow truck.
- Never work under a unit supported by a tow truck cable only.
- Use moderate speeds when towing.
- The tow truck winch and cable shall be kept in safe operating condition.
- Hoisting and winching shall not be done at the same time.

Jump Starting Safety Guidelines

- Hook positive to positive and negative to engine ground, the final hookup made shall be the engine ground to reduce the possibility of sparks and explosion.

- Never expose the battery to open flames or sparks. Do not smoke near the battery.
- Do not allow jumper cable clamps to contact other metal during the hookup procedures.
- If battery acid comes in contact with skin, flush the affected area with water.
- Eye, hand and face protection is required when working with batteries.
- Do not wear rings, watches or other metal which may short circuit the battery.

Tire Maintenance General Safety Guidelines

- Use a jack that is big enough for the job.
- When removing a wheel from a vehicle, loosen all lug nuts and then strike the wheel so that no binding or tension exists behind the lug nuts.
- Block raised units even for short periods of time.
- Tires not on racks shall be placed in such a manner that they will not roll or fall.
- The tire maintenance technician may require assistance with the handling of heavy tires or breaking loose lug nuts, especially on road calls. In such cases, help may be given by the affected unit's operator or Equipment Management personnel.
- Unauthorized personnel shall not operate tire repair equipment.

Tire Repair Safety, Split Ring-Type Wheels

- Do not attempt to repair a flat on a split ring-type wheel unless you have been trained.
- Be certain that the ring is installed correctly.
- The wheel shall be placed in the tire cage before inflating.
- To make tire demounting and mounting easier, use a non-flammable tire lubricant or tire sealant labeled for that purpose.
- Always wear safety glasses.
- Always refer to Multi Piece Rim Matching Chart and Demounting and Mounting procedures for Truck/Bus Tires when repairing this type of tire.

Concrete Saws

- Blade guards shall remain in place while the machine is running.
- Saw blades shall be secured so as not to come loose and cause injury.
- Steel blades shall be kept from overheating by using the machine's water system.
- Do not attempt to lower the blade too quickly into the surface to be cut.
- Cut in a straight line.
- Use proper trailering guidelines.
- It is not recommended to use the saw on rough or uneven surfaces.
- Do not leave a running concrete saw unattended.
- Keep hands and feet clear of the saw blade unless the machine is shut off.
- Eye protection and hearing protection is required.
- Support the saw to prevent tip over while pulling the starter cord.

Asphalt and Concrete Grinder

- Stay clear of the rotating drum. Keep drum guards in place while the unit is operating.
- The three-wheel and four-wheel design of the machine makes it more vulnerable to tip over. Be especially cautious when loading and unloading from the trailer.
- Eye protection, hearing protection and a dust mask is required when operating this machine.

Concrete Finishing

- Bare skin shall not be exposed to fresh concrete for extended periods of time. Doing so can result in cement burns. Wash hands frequently and use a lanolin-based ointment to prevent skin cracking and possible infection.
- When using long wooden or aluminum screeds, be cautious of overhead power lines.
- Personnel are encouraged to use knee pads or other knee protection.
- Protect the job site with a vehicle when possible. Employees shall wear florescent yellow, orange, lime green safety vests when working in traffic ways.

- Personnel shall wear rubber boots when walking in fresh concrete.
- If fresh concrete gets into the eye, rinse it immediately, one should always wear safety glasses.

Asphalt Placement-Material Handling

- Asphalt is an extremely hot, sticky substance, usually about 360 degrees F. Avoid contact with bare skin. Avoid standing in hot asphalt if at all possible.
- Be constantly aware of the whereabouts of fellow employees when raking or shoveling asphalt so as not to inflict injury with the tool handle.
- Asphalt rakes shall be laid down with the tines down only.
- When burning asphalt buildup off of tools, use extreme caution as the possibility of fire is high.
- The use of gasoline is not recommended for cleaning purposes. Use diesel fuel or a non-flammable cleaning solvent.

Tar Kettles

- Use proper trailering guidelines.
- When lighting the burners, light them as quickly as possible to prevent gas buildup and explosion. Any defects in the gas igniting system shall be reported immediately.
- Newer style kettles shall be heated slowly to prevent fume buildup and explosion.
- Trained personnel shall be present whenever kettles are being filled from an asphalt plant.
- Stay within the safe temperature range for the oil being heated. Be alert for fires.
- Untrained personnel shall not be allowed to start or operate kettles.
- Use extreme caution when dealing with hot oil. Leather gloves are required. Use caution when opening the kettle top. Severe burns can result.

Asphalt Rollers

- Use caution when loading or unloading from a trailer.
- Operators shall be cautious not to pass the roller over fellow employees' feet.

- Be cautious of passing traffic. Always be aware or surrounding traffic.
- Never back up without checking behind first.

Chipper-Safe Operating Guidelines

- A minimum of two employees shall be needed, one to feed the machine and one to give cut material to the feeder person. Only qualified, authorized employees are allowed in this area.
- Material shall be handed to the feed person one piece at a time, butt end first.
- Brush shall be piled 20 feet from the chipper and handled one piece at a time from there.
- The machine shall be fed from one side and not from the front.
- Ear, head, gloves and eye protection shall be used.
- Do not wear loose fitting clothing.

Street Sweepers-Personnel Safety, Operation and Traffic Concerns

- Use grab bars and steps for entry/exit.
- When washing out hopper, stay clear of gutter brooms and the apron. Always set the park brake. Never stand underneath an open, unsupported hopper. Refer to operator's manual for safe cleaning procedures.
- Ear protection shall be worn.
- When backing or turning, small car and children are not visible behind the unit.
- The left hand side of the unit is virtually blind. Cars passing may not be seen, especially when turning or pulling out around parked vehicles. On narrow streets, when cars are parked across form each other, be certain of adequate clearance. If in doubt, get out and look.
- In front, small objects that get directly in front of the sweeper are not visible. Small children are a primary concern.
- With poor visibility being a factor, be extra careful making turnarounds. Check all directions.
- When straight sweeping on arterials, beware of passing traffic.
- The sweeper shall be equipped with a Slow Moving Vehicle emblem and a Caution- Sudden Turns sign on the back.
- Use the beacon light and flashers at all time while sweeping.

Electrical Safety

- Do not ground yourself in water, on pipes or drains. Avoid them when working near electricity.
- Allow only authorized people to work on electrical equipment.
- Keep all electrical controls accessible and well-marked.
- It's a good idea to keep rubber mats on the floor in front of the electrical panels, keep edges trimmed so that they do not become tripping hazards.
- Keep wires from becoming tripping hazards.
- Work in pairs around live electrical equipment.
- Place lock-out/tag out equipment on the switches when working on electrical equipment which another person could turn on.
- Never use metal ladders around electrical equipment.
- When there is a question about any electrical hazard, ask before you expose yourself to it.
- Do not touch any part of your body to test a circuit.
- When working around electrical equipment, as with any other hazardous work, keep your mind on the hazards at all time.
- Electrical equipment and lines shall always be considered as energized unless they are positively proven to be de-energized and properly grounded.
- Employees shall report any defective line, apparatus, tool or other condition which in their judgment may be dangerous either to persons or property to their immediate supervisor.
- Avoid contact with overhead lines at all costs, lengthy tools, especially those conductive metal types shall be used around power lines only if there is no possibility of coming within ten feet of the overhead line.
- Crew foremen are responsible for the safety of the crew members in this regard.
- Operators shall be certain that adequate clearance exists before raising a dump body, loader bucket or other machine extremity in an area where overhead lines are present.
- Report any lines which may be hanging below normal height for any reason.
- In the even of accidental line contact, remain in the vehicle until qualified personnel determine that a safe exit is possible.
- All line damage, obvious or suspected, shall be reported at once.

- All downed lines shall be treated as dangerous. Avoid contact of any kind and warn any bystander to stay clear.
- Emergency First Aid if someone came in contact with electrical power line. Treat injured parties only if they can be treated safely. In a situation where a live power line is lying on or near a victim, the risk of electrocution is equal for the rescuer. Do not make two victims out of one.
- A lone, dry non-conductive object such as a wood pole can be used to separate the victim from the electrical contact.
- Use the quickest means of communications available to gain access to the 911 system.
- As soon as safely possible, treat the victim for respiratory and/or cardiac arrest, burns and shock.
- When opening a fuse panel, always stand to the side of the box and look away when opening to fuse panel door.

Employee Safety—Working Around Buried Utilities

- Before digging around buried cable, have the utility locate, expose and protect their cable.
- A spotter shall be used when machinery is involved, especially when the operator does not have a good viewing angle.
- Do not work in a utility cut where the smell of gas is present or where unprotected wire is found.
- Crew foremen are responsible for the safety of the crew.
- In the event of damage, report damage immediately, especially if natural gas is involved.
- Stay clear of damaged lines.
- When natural gas lines are involved, clear the area. Do not start a vehicle, light a match or create a spark or any kind. Keep bystanders and traffic away. Position all personnel up wind.
- When the situation is potentially life threatening contact 911 by the quickest means available.
- Natural gas incidents can result in injury by inhalation or by explosion and fire. Give first aid for burns, breathing stoppage and shock as the situation requires.
- Move victim only if it is safe for the rescuer to do so. Movement may be necessary to place the victim where it is safe to start first aid.

Electric Cords

- Electric cords shall be maintained in safe condition. Defective plugs shall be repaired or replaced. Any defective insulation on an electric cord shall be repaired or replaced.
- Only cords rated for outdoor use shall be used outside and shall be ground fault protected.
- Electric cords shall be disconnected by pulling on the plug and not the cord.
- Extension cord hand lamps used in an explosive type dust or gaseous atmosphere shall be of the explosion-proof type.
- Extension cord hand lamps shall be of the molded composition type, or other type approved for the purpose. Brass-shell, paper-line, lamp-holders shall not be used. Hand lamps shall be equipped with a handle and substantial guard over the bulb. Metallic bulb guards shall be grounded.
- Extension cords used with portable electric tools shall be of the three-conductor grounding-type.
- Extension cords shall be of continuous length without splices or taps.
- Extension cords shall not be draped over hot surfaces, such as steam lines, space heaters or other heat sources.
- Extension cords should be inspected regularly for any defects, cuts or tears. If any defects are found, they should be removed from service, repaired by a qualified person or destroyed and replaced.

Chain Saws

- Before using any powered tool, employees should be instructed on controls and the use of the equipment. The employee should read the owner's manual to familiar themselves of the operation of the equipment.
- When starting a chain saw, it shall be placed on or against a solid support. The saw bumper shall be against the tree or limb before starting a cut. To prevent accidents, stand with your weight evenly distributed on both feet and off to the side. Hold saw firmly with both hands.
- Always stop engine and take the spark plug off before working on the saw.

- Never set a saw down while the blade is engaged.
- Never refuel while the engine is running or hot. If gas is spilled on the chain saw during refueling, it shall be wiped off before starting.
- Employees shall wear hard hats, eye and face protection, ear protection and chaps when operating a chain saw. Employees shall not wear jewelry or scarves or loose fitting clothing. Suitable shoes (safety shoes are recommended) shall be worn. Open-toe, tennis shoe, etc., do not give adequate protection and shall not be worn.
- Chain saws shall not be operated above shoulder level.
- Employees shall not approach chain saw operator within arm reach of the saw, when the saw is in operation.

Ropes, Cables and Chains-General Safety

- Never stand or work under an object being lifted, supported or held in place by ropes, cables or chains.
- Positioning of objects suspended by cables, ropes and chains shall be done with guide lines. These shall be attached before the object is raised, and of enough length to insure worker safety should object being lifted fall.
- When pulling or towing, never straddle the line being used. Stand far enough back so that should the line break, it does not strike you.
- When running a tow line between two objects, clear the area of any item which would prevent the tow line from pulling in a straight line.
- Bent hooks should be replaced.
- Safety hooks or clevises shall be used where the possibility of a hook being snagged or falling off exists.
- Put tension on a line slowly. Do not jerk or snap it.
- Ropes shall not be used when they are damaged, frayed or rotted.
- Use gloves when handling moving rope.
- Rope shall be properly dried after being wet.
- Knots reduce rope strength by 50% or more. Use splices if possible.
- Never attempt to use a fiber rope for heavy jobs suited to the use of wire rope or chains.
- Do not use chain when kinked or twisted.
- Chains stretched beyond original length can lose up to 75% or original strength.
- Bolts shall not be used to fasten chain links together.

- Chain is less reliable than cable (or wire rope) because it could break without warning.
- The use of glove is required while handling wire rope (cable).
- Cable shall not be allowed to kink.
- Cables which are frayed or damaged shall not be used.
- Wire rope (cable) in good condition and properly fitted would be considered the strongest of the three pulling and lifting lines.
- Make sure cable clamps and eyes are properly installed.

Jackhammers

- All hose connections must be secured with wire or safety pins.
- Both the operator of a jackhammer and the other members of the crew must wear approved eye protection (goggles, face shield or safety glasses with side shields) and hearing protection.
- It is suggested that operators of jackhammers wear steel toed shoes or strap on safety toes.
- Before using the jackhammer, be sure there are no utility lines such as electricity or gas lines you could damage. If there is any doubt, contact someone to check the area for underground utilities.

Skid Steer Loader (Bobcat)

- Read and understand the manufacturers operator's manual before starting the engine. If there is something in the manual you don't understand, ask your supervisor to explain it to you.
- Protect yourself, wear all the protective clothing and personal safety devices issued to you or called for by job conditions. You may need a hard hat, safety shoes, safety glasses, goggles or face shield, heavy gloves, hearing protection, reflective clothing, wet weather gear or a filter mask. Wear whatever is needed, don't take chances.
- Know the capacity and operating characteristics of this machine.
- Never modify or remove any part of the machine (except for service and reinstall before operating).
- Fasten your seat belt/operator restraint before you start.
- Keep others away from your operation.

- Look before backing up.
- Carry the load low.
- Whenever you leave your machine, always lower the lift arms and put the bucket or attachments flat on the ground of lock the lift arms with the lift arm restraint devices. Engage the parking brake, stop the engine, cycle the hydraulic controls to eliminate pressure and remove the key before you dismount.
- Know your Skid Steer Loader. Know how to operate all equipment on your machine. Know the purpose of all the controls, gauges and indicators. Know the rated load capacity, speed range, braking and steering characteristic, turning radius and operating clearances. Keep in mind that rain, snow, ice, loose gravel, soft ground, etc., change the operating capabilities of your machine.
- Before you begin your workday, you must inspect your machine and have all systems in good operational condition. Do not operate the machine until all deficiencies are corrected.
- Use caution when fueling, never fuel when the engine is running or hot.
- Know the working area, check for holes, drop offs and obstacles.
- Avoid steep slopes or unstable surfaces. If you must drive on a slope, keep the load low and proceed with extreme caution. Do not drive across and excessively steep slope under any circumstances, travel straight up and down the slope.
- Travel up and down slopes with the heavy end of the loader pointed uphill. Loaded bucket, with bucket and load pointed uphill. Empty bucket with bucket pointed downhill.

Scaffold Safety

- Erection of scaffolding to be under the direction of a competent person.
- Hard hats required for all employees involved with or near scaffolding.
- All scaffolding footing sound and rigid, footing not to be set on soft ground, frozen ground that could melt or resting on blocks.
- Scaffolding should be level.
- All wheels or castors of scaffolding should be locked.
- The scaffolding should be able to hold four times its maximum intended load.
- The platform should be complete front to back and side to side (fully planked or decked, with no gaps greater than 1 inch).
- Guardrails and toe boards should be in place on all open sides.
- All sections should be pinned and appropriately secured.

- There should be a safe way to get on and off the scaffold, such as a ladder without climbing on cross braces.
- The scaffold should be inspected by a competent person before being put in use.
- If the scaffold is over 10 feet high, personal fall protection should be used and guardrails should be over 38 inches over 38 inches high.
- Scaffold loads (including tools and other equipment) kept to a minimum and removed when the scaffold not in use (like at the end of a day).
- Employees should be removed from scaffolds during high winds, rain, snow or bad weather.
- Materials should be secured before moving a scaffold.
- Employees should be removed from the scaffold before a scaffold is moved.
- All heavy tools, equipment and supplies should be hoisted up rather than carried up by hand.

Compressed Air Safety

- All pipes, hoses, and fittings must have a rating of the maximum pressure of the compressor. Compressed air pipelines should be identified (psi) as to maximum working pressure.
- Air supply shutoff valves should be located (as near as possible) at the point-of-operation.
- Air hoses should be kept free of grease and oil to reduce the possibility of deterioration.
- Hoses should not be strung across floors or aisles where they are liable to cause personnel trip and fall hazards. When possible, air supply hoses should be suspended overhead, or otherwise located to afford efficient access and protection against damage.
- Hose ends must be secured to prevent whipping if an accidental cut or bread occurs.
- Pneumatic impact tools, such as riveting guns, should never be pointed at a person.
- Before a pneumatic tool is disconnected (unless it has a quick disconnect plugs), the air supply must be turned off at the control valve and tool bled.
- Compressed air must not be used under any circumstances to clean dirt and dust from clothing or off a person's skin. Shop air used for cleaning should be regulated to 15 psi unless equipped with diffuser nozzles to provide lesser pressure.

- Goggles, face shields or other eye protection must be worn by personnel using compressed air for cleaning equipment.
- Static electricity can be generated through the use of pneumatic tools. This type of equipment must be grounded or bonded if it is used where fuel, flammable vapors or explosive atmospheres are present.

Safety Requirements for Operating & Maintaining Compressed Air Machinery

- All components of compressed air systems should be inspected regularly by qualified and trained employees. Operators need to be aware of the following:
- **Air Receivers**
    - The maximum allowable working pressures of air receivers should never be exceeded except when being tested. Only hydrostatically tested and approved tanks shall be used as air receivers.
    - The intake and exhaust pipes of small tanks, similar to those used in garages, should be made removable for interior inspections.
    - No tank or receiver should be altered or modified by unauthorized persons.
    - Air receivers should be fitted with a drain cock that is located at the bottom of the receiver.
    - Receivers should be drained frequently to prevent accumulation of liquid inside the unit. Receivers having automatic drain systems are exempt from this requirement.
    - Air tanks should be located so that the entire outside surfaces can be easily inspected. Air tanks should not be buried or placed where they cannot be seen for frequent inspections.
    - Each air receiver shall be equipped with at least one pressure gauge and a safety valve of proper design.
    - A safety (spring loaded) release valve shall be installed to prevent the receiver from exceeding the maximum allowable working pressure.
    - Only qualified personnel should be permitted to repair air tanks, and all work must be done according to established safety standards.

- **Air Distribution Lines**

    - Air lines should be made of high quality materials, fitted with secure connections.

- Only standard fittings should be used on air lines.
- Operators should avoid bending or kinking air hoses.
- Air hoses should not be placed where they will create tripping hazards.
- Hoses should be checked to make sure they are properly connected to pipe outlets before use.
- Air lines should be inspected frequently for defects, and any defective equipment repaired or replaced immediately.
- Compressed air lines should be identified as to maximum working pressures (psi), by tagging or marking pipeline outlets.

- **Pressure Regulation Devices**

  - Only qualified personnel should be allowed to repair or adjust pressure regulating equipment.
  - Valves, gauges and other regulating devices should be installed on the compressor equipment in such a way that cannot be made inoperative.
  - Air tank safety valves should be set no less than 15 psi or 10 percent (whichever is greater) above the operating pressure of the compressor but never higher than the maximum allowable working pressure of the air receiver.
  - Air lines between the compressor and receiver should usually not be equipped with stop valves. Where stop valves are necessary and authorized, safety valves should be installed between the stop valves and the receiver safety valves.
  - Blow off valves should be located on the equipment and shielded so sudden blow offs will not cause personnel injuries or equipment damage.
  - Case iron seat or disk safety valves should be approved and stamped for intended service application.
  - If the design of a safety or a relief valve is such that liquid can collect on the discharge side of the disk, the valve should be equipped with a drain at the lowest point where liquid can collect.
  - Safety valves exposed to freezing temperatures should be located so water cannot collect in the valves. Frozen valves must be thawed and drained before operating the compressor.

- **Air Compressor Operation**

  - Air compressor equipment should be operated only by authorized and trained personnel.
  - The air intake should be from a clean, outside, fresh air source. Screens or filters can be used to clean the air.
  - Air compressors should never be operated at speeds faster than the manufacturer's recommendation.
  - Equipment should not become overheated.
  - Moving parts, such as compressor flywheels, pulleys, and belts that could be hazardous should be effectively guarded.

- **Compressed Air Equipment Maintenance**

  - Only authorized and trained personnel should service and maintain air compressor equipment.
  - Exposed, non-current carrying, metal parts of compressor should be effectively grounded.
  - Low flash point lubricants should not be used on compressors because of its high operating temperatures that could cause a fire or explosion.
  - Equipment should not be over lubricated.
  - Gasoline or diesel fuel powered compressors shall not be used indoors.
  - Equipment placed outside but near buildings should have the exhausts directed away from doors, windows and fresh air intakes.
  - Soapy water or lye solutions can be used to clean compressor parts of carbon deposits, but kerosene or other flammable substances should not be used. Frequent cleaning is necessary to keep compressors in good working condition.
  - The air systems should be completely purged after each cleaning.
  - During maintenance work, the switches of electrically operated compressors should be locked open and tagged to prevent accidental starting.
  - Portable electric compressors should be disconnected from the power supply before performing maintenance.

- **Vermeer Tub Grinder**

  - Read, understand and follow all safety instructions and safety messages included in the operations manual for the Vermeer Tub Grinder.
  - Allow only responsible, properly instructed individuals to operate and service the Tub Grinder.
  - Keep all safety decals and instruction decals in good condition. Replace any missing or damaged decals.
  - Carefully supervise inexperienced operators or other workers, such as other equipment operators supporting the grinding operation.
  - Be sure the machine is in good operating condition and that all safety devices are installed and functioning properly.
  - Visually inspect the machine daily before starting the machine.
  - Make no modification to your equipment unless specifically recommended or requested by Vermeer Manufacturing Company.
  - Wear required personal protective equipment:
    - Wear close fitting clothing and confine long hair.
    - Avoid wearing jewelry, such as rings, wrist watches, necklaces or bracelets.
    - Always wear a hard hat.
    - Safety glasses
    - Hearing Protection
    - Work shoes
    - A dust mask (in dusty conditions)
  - Avoid Power Lines, electrocution is possible if the tub grinder gets too close to or touches a power line. Maintain a safe clearance of at least 10 feet between any part of the machine and any electrical line.
  - Keep hands, feet and clothing away from power driven parts.
  - Keep shields in place and properly secured.
  - Materials ejected from the tub grinder can cause serious injury.
  - Locate the tub grinder away from populated areas, public roads, inhabited buildings, buildings and property that could be damaged.
  - Place “thrown object zone” perimeter cones where visible to approaching unauthorized persons, normally 500 feet from tub grinder.
  - Prohibited material throw further, do not grind material such as steel, stone, concrete, heavy plastics, tires, etc. Grind only permitted materials. Prohibited materials can travel up to 1500 feet from the tub grinder.
  - Keep tub as full as practical to help contain thrown objects.
  - Do not hand feed material into the tub.

- Inspect raw materials pile for prohibited materials.
- Use shutdown procedure before servicing, cleaning or inspecting the machine and before working on or near the hammers, conveyers, the tub, all other moving parts and the grapple loader.
- Stay clear of the Rotating Driveling.
- Mount and dismount safely, keep steps, platforms and operators area clear of objects and debris. Face the machine when mounting and dismounting.

City of Council Bluffs Fire Prevention Plans in the Work Place

Fire in the Work Place: Preventing Fires is Everybody's Job.

Here are some things you can do to prevent work place fires:

- Store chemicals properly in tightly closed containers.
- Read Labels and MSDSs for the fire hazards related to the chemicals you use.
- Keep flammable and combustible materials away from ignition sources.
- Keep incompatible chemicals away from each other.
- Check containers regularly for damage or leaks.
- Clean flammable liquid spills right away, and dispose of liquids and cleanup materials properly.
- Make sure electrical cords and plugs are in good condition before using electrical equipment.
- Don't overload electrical circuits.
- Keep hot equipment away from combustible materials.
- Shut down electrical equipment that smokes or sparks.
- Obey smoking rules and "No Smoking Signs."
- Extinguish cigarettes and matches completely in designated containers.
- Handle compressed gas cylinders carefully and keep them away from heat.
- Keep your work area free of trash, combustible scrap materials, and other debris.
- Place oily rags in metal containers with lids.
- Keep machines free of dust and grease.
- Report fire hazards you can't correct yourself.
- Make sure coffee pots and other electrical appliances are unplugged when not in use and at the end of the day.
- Never pour flammable liquids down sewers or drains.
- Clothing should be changed if it becomes soaked with a flammable liquid.
- Every employee at each respective location should take the time to learn where all fire extinguishers are kept.
- All cylinders (empty or full) are to be chained in the upright position with valve covers securely fastened when not in use.
- Flammable liquids are to be stored in Flammable Safety Cabinets.
- Gasoline and gasoline/oil mixed mower and weed eater fuel are to be kept in approved safety cans.
- Never fuel equipment when the equipment is still hot, let them cool off before fueling.
- Never smoke when fueling any type of equipment or vehicles.

Types of Fire Extinguishers

There are five general categories of fires:

- **Class A** fires are ordinary materials like burning paper, lumber, cardboard, plastics, etc.
- **Class B** fires involve flammable or combustible liquids such as gasoline, kerosene and common organic solvents.
- **Class C** fires involve energized electrical equipment, such as appliances, switches, panel boxes, power tools and hot plates. Water can be a dangerous extinguishing medium for Class C fires because of the risk of electrical shock unless a specialized water mist extinguisher is used.
- **Class D** fires involve combustible metals, such as magnesium, titanium, potassium and sodium. These materials will burn at high temperatures and will react violently with water, air and/or other chemicals. Handle with care.
- **Class K** fires are kitchen fires. This class was added to the NFPA portable extinguisher Standard 10 in 1998.

Some fires may be a combination of these. Your fire extinguisher should have ABC ratings on them. The ABC fire extinguisher is your best overall choice for common fire situations. They leave a blanket of non-flammable material on the extinguished material which reduces the likelihood of reignition. They do make a terrible mess, but if the choice is a fire or a mess, take the mess.

It is recommended not to use an ABC fire extinguisher on computer equipment. This type of fire extinguisher can be very corrosive to certain electronics equipment and some scientific instruments. You should keep in mind if the ABC fire extinguisher is the only type you have, you will have no choice but to use an ABC fire extinguisher. It is recommended for a fire on electronics equipment, one should use a fire extinguisher described as a clean agent, one that leave no residue after discharge. An example of this type of fire extinguisher is a Halogen Extinguisher. This type of extinguishers is ideal for computer rooms, telecommunications equipment and electronics.

Using Fire Extinguishers: You are not required to fight a fire. If you have the slightest doubt about your control of the situation, do not fight the fire. Use a mental checklist to make a Fight or Flight decision. Attempt to use an extinguisher only if all of the following apply:

- The building is being evacuated, the employees have been notified.
- The fire department is being called, dial 911.
- The fire is small, contained and not spreading beyond it starting point.
- The exit is clear, there is no imminent peril and you can fight the fire with your back to the exit.

- You can stay low and avoid smoke.
- The proper extinguisher is immediately at hand.
- You have read the instructions and know how to use the extinguisher.

If any of these conditions have not been met, don't fight the fire. Call for help and leave the area.

Whenever possible, use the "Buddy System" to have someone back you up when using a fire extinguisher. If you have any doubt about your personal safety, or if you cannot extinguish a fire, leave immediately and close off the area (close the doors but do not lock them). Leave the building, but contact a firefighter to relay whatever information you have about the fire.

Pull the pin on the fire extinguisher. Stand several feet from the fire, depress the handle and sweep back and forth toward the fire. Note:

- Do not walk on an area that you have "extinguished" in case the fire reignites or the extinguisher runs out! Remember you usually can't expect more than 10 full seconds of extinguishing power on a typical fire extinguisher and this could be significantly less if the extinguisher was not properly maintained or partially discharged.

- The metal parts on CO2 extinguisher tend to get dangerously cold—practice using one beforehand or have someone show you the proper way to hold one.

- Proper training is required by OSHA, thus we will be doing annual fire extinguisher training.

- Direct the extinguisher at the base of the flames until the fire is completely out.

- Recharge any discharged extinguisher immediately after use. If you discharge an extinguisher (even just a tiny bit) or pull the pin for any reason, call your Fire Extinguisher Representative to arrange a replacement.

Care and Maintenance of Your Extinguisher

At least once a month (more often in severe environments) you should inspect you extinguishers. Ensure that:

- The extinguisher is not blocked by equipment, coats or other objects that could interfere with access in an emergency.
- The pressure is at the recommended level. On extinguishers equipped with a gauge means that the needle should be in the green zone-not too high or not too low.
- The nozzle or other parts are not obstructed.
- The pin and tamper seal are intact.
- There are not dents, leaks, rust, chemical deposits and other signs of abuse/wear. Wipe off any corrosive chemicals, oil, gunk, etc. that may have landed on the extinguisher.
- Some manufacturers recommend shaking your dry chemical extinguishers once a month to prevent the powder from settling/packing.
- Fire extinguishers should be pressure tested (a process called hydrostatic testing) a specific times, ask your fire extinguisher representative what your extinguisher requirements are.

Use this Acronym as a quick reference as to how to use a fire extinguisher:

P A S S

Pull the Pin at the top of the extinguisher. The pin releases the locking mechanism and will allow you to discharge the extinguisher.

Aim at the base of the fire, not the flames. This is important – in order to put out the fire, you must extinguish the fuel.

Squeeze the lever slowly. This will release the extinguishing agent in the extinguisher. If the handle is released, the discharge will stop.

Sweep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out. Operate the extinguisher from a safe distance, several feet away, and then move towards the fire once it starts to diminish. – different fire extinguishers recommend operating them from different distances. Remember: aim at the base of the fire, not at the flames.

A typical fire extinguisher contains 10 seconds of extinguishing power. This could be less if it has already been partially discharged. Always read the instructions that come with the fire extinguisher beforehand and become familiarized with its parts. It is highly recommended by fire prevention experts that you get hands on training before operating a fire extinguisher.

Once the fire is out, don't walk away. Watch the area for a few minutes in case it reignites. Recharge the extinguisher immediately after use.

Emergency Action Plans

The purpose is to ensure that all employees are aware of the procedures necessary to protect lives and property in the event of an emergency. This policy is designed to comply with the provisions of IOSHA standard 1910.38.
This policy applies to all City of Council Bluffs employees and to City of Council Bluffs owned facilities in which employees occupy daily.

Every City of Council Bluffs owned facility that meets the applicability requirement shall develop a written emergency action plan that contains the following elements:

- Emergency escape procedures and emergency escape route assignment.

- Procedures to be followed by employees who must remain to operate critical operations before they evacuate (when applicable).

- Procedures to account for all employees after emergency evacuation has been completed. A designated meeting area should be established where employees gather after the evacuation takes place so everyone can be accounted for.

- Rescue and medical duties for those employees who are qualified to perform them. Help non employees evacuate a building because they may not be familiar with your building or they may be handicapped. Do not use elevators in the event of a fire.

- The preferred means of reporting emergencies.

- Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under this policy.

- An alarm system capable of notifying all employees throughout the facility in the event of an emergency. The alarm must be able to be perceived above ambient noise levels.

- All employees must be trained in all aspects of this policy. In the event an employee transfers to another facility he/she must be trained as to the new facilities policy.

- It is recommended a drawing of the floor plan for each respective location be made marking all exits, routes of exit and location of fire extinguishers.

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City of Council Bluffs Emergency Eyewash and Shower Equipment Safety Policy

The City of Council Bluffs policy provides the requirements to ensure that all employees are advised on the proper use of emergency eyewash and shower equipment in the event of an accident, or emergency situation, and that equipment is maintained in a serviceable condition.

Requirements

General

- Most hazardous chemicals require 15 minutes of flushing with large amounts of water for skin or eye exposure, but some chemicals may require 30 minutes. Any chemical product that is water reactive will have special instructions that will be provided in the Material Safety Data Sheet (MSDS).
- Whenever the eyes or body of an employee may potentially be exposed to injurious corrosive or other chemical equipment hazards, quick drenching equipment for flushing of the eyes and body shall be provided within or immediately adjacent to their facility or work area.
- The construction and maintenance of emergency showers and eyewashes shall meet the requirement of ANSI Z358.1, Emergency Eyewash and Shower Equipment.
- Each emergency shower shall be assembled in accordance with manufacturer's instructions.

Plumbed Emergency Showers

Emergency Shower Heads

- Emergency shower heads shall be designed and located so that a water column is provided not less than 82 inches or more than 96 inches in height from the surface on which to user stands.
- Emergency shower heads shall be capable of delivering a minimum of 30 gallons of water per minute.
- The water shall be substantially dispersed throughout the spray pattern so as not to injure the user. The spread in diameter of the water spray pattern shall be a minimum of 20 inches.

Water Control Valves

- The water control valve shall be designed so that the water flow remains on without requiring the use of the operator's hands.
- The valve shall be easy to use and go from off to on in one second or less.

- The valve shall be resistant to corrosion from potable water.
- Valve actuators shall be easy to locate and readily accessible to the user.

Shower Enclosures

- If shower enclosures are used they shall be a minimum of 34 inches in diameter of unobstructed area. Shower enclosures are not required.

Shower Locations

- Emergency showers shall be accessible requiring no more than 10 seconds to locate. Examples of emergency shower location are as follows:
    - A facility that conducts battery-charging operations.
    - A facility that contains liquids or chemical that is corrosive, irritating and harmful to the skin.
    - Any location where a MSDS states that flushing is required due to skin contact with a chemical product.

Emergency Eyewash and Miscellaneous Equipment

Plumbed Eyewash Equipment

- A means shall be provided to ensure that a controlled flow of continuous flushing fluid is provided to both eyes simultaneously at a velocity low enough not to be injurious to the user. The unit should be attached to ½ inch water supply line at 30 pounds per square inch of flow pressure. A water stream rising 6 to 12 inches from each nozzle is satisfactory.
- There shall be no sharp projections in the operating area of the unit.
- Nozzles shall be protected from airborne contaminants. Whatever means is used to afford protection, such as covers, their removal shall not require a separate motion by the operator when activating the unit.
- The unit shall be designed to provide enough room to allow the eyelids to be held open with the hands while the eyes are in the stream of water.
- Delivered water shall be in the temperature range of approximately 60 to 100 degrees Fahrenheit.
- Units shall be positioned with the water nozzles 33 inches to 45 inches from the floor and 6 inches minimum from the wall or nearest obstruction.
- Eyewash units shall be accessible requiring no more than 10 seconds to locate.
- Units shall be in a well-lighted area, and be identified with a highly visible sign.

Self-Contained Eyewash Equipment

- Self-contained units shall be constructed of materials that will not corrode. The stored flushing fluid shall be protected against airborne contaminants.
- Self-contained units shall use any effective antibacterial agent, suitable for ophthalmic use, added to tap water to help preserve the water and reduce the possibility of pathogen developing in the flushing solution. An isotonic saline solution buffered to a pH of 7.3 to 7.4 and preserved with a suitable antibacterial agent is less irritating to the eye over a 15-minute flush. The solution will be changed out at least quarterly or as directed by manufacturer's instructions.
- Self-contained units shall be capable of delivering to the eyes not less than 1.5 liters of water per minute for 15 minutes.
- Specific directions in paragraphs above apply to self-contained units.
- Units should be periodically tested to ensure that a minimum of 1 gallon of water is collected over a 2 ½ minute time period or as prescribed by the manufacturer's test. This test should be performed during the servicing process.
- Eyewash units shall be accessible requiring no more than 10 seconds to locate.
- Units shall be in a well-lighted area, and be identified with a highly visible sign.

Miscellaneous Emergency Equipment

- Combination units of emergency eyewash and shower equipment shall be designed so that the components operate individually. They shall meet the same requirements as identified in this procedure.
- Numerous other types of emergency equipment such as eye/face units, hand-held drench hoses, etc., are on the market to support the equipment identified in the procedure. They are not intended to replace the units identified for emergency shower or eyewash and should only be used on a temporary basis. Specific information pertaining to support equipment of this nature can be found in ANSI Z358.1, Emergency Eyewash and Shower Equipment.

Training and Compliance

- Employees shall follow the Hazard Communication Program, and ensure they never use any chemical product without first reading the MSDS and understanding the requirements for flushing eyes or body in the event of spills.
- Supervisors shall ensure employees who may become exposed to a chemical splash are instructed in the proper use of an emergency eyewash and shower as follows:

- Remove clothing covering any affected body parts, and treat, store or dispose of clothing as instructed by the MSDS sheet.
- Use the emergency shower or eyewash for a minimum of 15 minutes or as directed by the MSDS, and use copious or flushing amounts of water.
- Employees will be shown the exact location of each emergency eyewash or shower installed at their facility.
- Eyelids shall be held open and eyeballs rolled so that water will flow to all surfaces when eye or eyelids are affected. Employees shall practice this procedure prior to an actual emergency. When the entire body is affected by chemical splash do this procedure while showering.
- Medical attention shall be obtained immediately following the required flushing of the employee's eyes or body parts. This can be accomplished if another employee calls 911 as soon as possible.

Maintenance

- Facility Supervisors or their representative shall conduct a monthly activation on each plumbed emergency eyewash or shower in their work areas.
- Annual inspections shall be conducted and documented on the facility. These inspections shall include an examination of the unit for obvious defects and activation to make sure it works properly and that the water is clean. If defective units are found they shall be tagged out or service and alternative means shall be found to provide employee protection if necessary until they are repaired.
- Inspections shall be documented on a card that is kept with the eyewash or shower. The inspection card will contain the name of the inspector and date of the inspection.
- Supervisors shall take corrective actions required to return-to-service any emergency shower/eyewash or related equipment, that is out of service. Affected employees shall be notified whenever emergency eyewash or shower equipment is out-of-service. A caution or warning tag system shall be placed on all eyewash, shower or related equipment that is out-of-service. When the shower is returned-to-service remove the tag and inform affected employees.
- Supervisors shall conduct a hazard assessment in their areas if a required emergency eyewash or shower is out of service to determine if operations can continue without this immediate protection or if they need to be terminated or delayed until a suitable temporary eyewash or shower can be secured.

Supervisors

- Ensures personnel are trained and qualified to perform the task assigned as part of their job duties.
- Ensures that employees who might be exposed to a chemical splash are instructed in the proper use of emergency eyewash and showers.
- Ensures MSDS sheets are available and used to train employees on the hazards of a chemical splash in the workplace.
- Ensure that all emergency shower or eyewash equipment within their facility remains in working order.
- Ensures that any eyewash/shower needing repair is returned to work as soon as possible.

Employees

- Complies with the policies and training requirements directed by this procedure.

Safety Director

- Ensures implementation of this procedure.
- Ensures revisions to this procedure are based on changes to referenced documents or a determination of deficiencies in work process or procedures.
- Ensures compliance with the policies and requirements directed by this procedure as part of annual safety, health and facility assessments/inspections.
- Evaluates job hazards and makes sure emergency shower or eyewash equipment is available if required.

Definitions

- Chemical – Any substance produced by or used in a chemical process, chemical compound or mixture of elements or chemical compounds.
- Corrosive – A chemical that causes visible destruction of, or irreversible alteration in, living tissue by chemical action at the site of contact.
- Hand-held drench hose – A flexible hose connected to a flushing fluid supply and used to irrigate and flush face and body areas.
- Hazardous Chemical – A substance with the potential of causing injury to personnel reducing their ability to perform a prescribed function; loss of material; damage to equipment, structures or the environment.
- Material Safety Data Sheet – A written or printed document created by the product manufacturer conveying information about a hazardous substance to include:

    - The chemical and common name of the substance.
    - The physical properties of the substance.

- The hazards or other risks involved in the use of the substance including fire and explosive potential, corrosivity, reactivity and any known acute and chronic health effects related to exposure.
- Safety handling practices, necessary personal protective equipment and other safety precautions.
- Emergency procedures for spill, fire, disposal and first aid.

- Plumbed shower/eyewash/drench hose equipment – An assembly consisting of a showerhead controlled by a stay open valve and operated by an approved control valve actuator and attached to fixed plumbing.
- Self-contained shower/eyewash/drench hose equipment – A cleansing assembly that contains its own flushing fluid and must be refilled or placed after use.

City of Council Bluffs Machine Guarding Safety Policy

The City of Council Bluffs Machine Guarding Safety Policy establishes general machine guarding procedures for all employees and equipment.

Requirements

General

Serious injury can result from coming into contact with the moving parts of a machine. This procedure outlines the requirements and describes methods to protect employees from machine hazards.

The safeguarding of any single machine depends on how and where it is used. Variables to consider include:

- Manufacturers' recommendations
- Government regulations
- Production requirements
- Accepted industry standards
- Operator training and skill
- Company practice
- Environmental factors
- Maintenance activities
- Cost of safeguarding options

Machine Safeguarding

Machine safeguarding is the application of engineering, work practice and administrative controls to prevent the injury of employees who operate machines or who are in the vicinity of machine operations. The primary steps of machine safeguarding are:

- Identify hazards
- Predict injury and the probability of occurrence
- Develop and implement a systematic safeguarding program
- Develop, implement and maintain machine guarding training and awareness

There are four major elements that should be understood about machine safeguarding:

- Any part, function or process that may cause injury must be safeguarded. Where possible, manufacturer-supplied means of guarding should be used.

- When safeguarding machines, utilize methods that provide protection and good production processes.
- Guards in themselves must not create a hazard.
- Guards should be attached to the machine, if possible.

Common Methods of Guarding are:

- Fixed Barrier Guards (Preferred)
- Adjustable Barrier Guards
- Interlocking devices
- Remote control and placement
- Electronic safety devices
- Removal devices
- Pressure-sensing devices
- Administrative controls

Combinations of the above methods may be required for machine guarding and operational safety.

General machine guarding policies are as follows:

- A guard shall be attached to each machine, if possible, and be designed so it does not offer an accident hazard.
- A guard device shall prevent the operator from having any part of the body from contacting the moving parts of machines or equipment during the operating cycle.
- Special hand tools provide supplemental protection for employees when placing and removing material. They permit easy handling of materials and eliminate the need for operators to place a hand in the danger zone. Such tools do not replace guarding.
- All revolving drums, barrels and containers shall be guarded by an enclosure that is interlocked with the drive mechanism.
- All revolving shafts, wheels, pulleys and other revolving parts shall be guarded to prevent an employee from coming in contact with the moving part.
- If the periphery of blades of a fan is less than seven feet above the floor or working level, the blades shall be guarded. The guard shall have openings that are no larger than ½ inch.
- Machines designed for a fixed location shall be securely anchored to prevent walking, moving and tipping.

Machine Operation Clearance

Machine operators and personnel performing maintenance should read and understand the applicable sections of a manufacturer's owner/operator and maintenance manuals before operating the machine. Machine operators and personnel performing maintenance shall receive training from the manufacturer of the machine with approved training before working with the machines, to include at a minimum:

- Train operators in proper operation, safety procedures, hazard recognition and emergency shutdown procedures for each machine that they are assigned to operate.
- Train personnel performing maintenance in hazard recognition, safe maintenance work practices and emergency shutdown procedures for each machine that they are assigned to service.
- Identify multiple energy sources and explain machine-specific lockout and tag out procedures to all personnel assigned to work with that machine.
- Identify personal protective equipment required for machine operators and maintenance personnel and give the personal protective equipment to affected personnel.
- Instruct personnel working with the machines that jewelry, watches, bracelets, rings, necklaces and neckties should not be worn and that long hair should be contained to prevent entanglement.
- Manager shall maintain a current list of personnel authorized to operate each machine or unique piece of equipment.

Installation

When installing a machine, the following guidelines should be used:

- Allow enough space between machines to ensure safe operation and material handling.
- Install machines according to manufacturer's instructions. Secure machines for fixed locations to prevent them from traveling during operation or if struck by equipment or personnel.
- Locate operator controls within easy reach of the operator. Operators should be able to get to controls without reaching over hazardous areas or points of operation.
- Install a disconnect switch that can be locked in the off position.
- Install exhaust systems, when applicable and supplementary lighting, if needed, for safe operation before machines are approved for use.
- Mount a placard on each machine that explains the safe work practices and procedures for that machine. If it is not practical to mount the placard on a machine, place the placard on the wall next to the machine in a location where the operator at the control station can easily see it.

Inspection

Employees who are assigned to machine operations or maintenance shall inspect machines before working on them.

Maintenance

A preventive maintenance program shall be implemented to maintain the reliability of the machines and their guards. The manufacturer should be consulted to develop the frequency and method of preventive maintenance.

Guarding Methods

Any machine that grinds, shears, punches, presses, squeezes, draws, drills, cuts, rolls, mixes or performs a similar action shall be guarded when possible. Safeguarding should prevent the operator and other employees from being struck, caught, burned, exposed to electric shock or hit with chips or coolant.

If the manufacturer's recommendations for safeguarding do not meet government or industry standards, additional safeguarding should be implemented to comply with these standards.

A machine shall be operated only when all safeguards are functional and in place. No control or component of the machine's safeguarding system should be altered or bypassed, including limit switches, light curtains, interlocks and presence-sensing devices, during normal operations.

Color Codes

Machines should be color-coded with safety orange where there is an intermediate level of hazard. For example:

- Hazardous parts of machines that may cut, crush or otherwise injure. Such hazards should be colored with an orange paint that shows when enclosure doors are open.
- The insides of movable guards and transmission guards for gears, pulleys, chain and the like.
- Exposed parts (edges only) of pulleys, gears, rollers, cutting devices, power jaws and the like.

Guards and protective covers should be color – coded with safety yellow. This designates that dangerous parts of machinery or energized electrical components are contained inside the guards and caution must be exercised. Exceptions include:

- Portions of transparent shields designed to afford a clear view of the operation should not be painted.
- Metal-mesh guards should be painted black to improve the operator's visibility. The border of the guard should be painted with safety yellow.

General Rules for Guarding

Guarding should:

- Protect the operator and other employees in the machine area from hazards such as those created by the point of operation, ingoing nip points, rotating parts, flying chips and sparks.
- Be attached to the machine or secured elsewhere if attachment is not possible.
- Not pose an accident hazard in itself.
- Conform to applicable government and industry standards. In the absence of such standards, it must be designed and constructed to prevent the operator and other employees from having any body part in the danger zone during the machine's operating cycle.
- Be secured by means not easily removed.
- Facilitate machine inspection as practical.
- Permit maximum visibility.

Power Transmission Apparatus

Hazards such as belts, gears, sprockets, chains, shafts and pulleys that are associated with power transmissions apparatus must be guarded. Cover all moving parts of power transmission apparatus that are within 7 feet from the floor or working platform. Guard all exposed parts of horizontal, vertical and inclined shafting that are within 7 feet from the floor or working platform. Use one of the following methods:

- A stationary casing constructed of expanded, perforated or solid-sheet metal.
- A helical-wound metal strip completely enclosing the shafting.
- A collapsible or telescoping guarding device unless the projection is less than one-half the diameter of the shaft and the projecting end is completely smooth.

For machines that require frequent oiling, use openings with hinged or sliding self-closing covers provided by the manufacturer.

- Provide oil lubrication points at a remote or ground level mechanisms.
- Instruct regular oilers to wear tight-fitting clothing.
- Whenever possible, oil machinery when equipment is not in motion.

Protect employees from projections in revolving parts by:

- Removing the projections (preferred)
- Making the projections flush
- Guarding the projections with a metal cover.

This does not apply to keys and setscrews already guarded within gear of sprocket casings.

Switches and Remote Controls

Switches and remote controls should be safeguarded as follows:

- Clearly mark switches and operating controls in simple language to indicate their purpose.
- Keep switches, operating controls, and control buttons in good operating condition at all times. If a component is damaged or missing, immediately repair or replace it.
- Guard the sides and tops of foot-operated control pedals to prevent accidental activation.
- Never use a foot-operated control to operate a machine unless safeguarding is installed to prevent hands or other body parts from entering the point of operation.

Roles and Responsibilities

Supervisors

- Ensure compliance in their functional areas with the policies and requirements directed by this procedure.
- Ensure their personnel are trained and qualified to perform the task being assigned to them.
- Perform or have designee perform quarterly machine guarding inspections of all machinery.
- Identify employees who are authorized to operate each piece of fixed shop machinery.
- Ensure defective and unsafe machinery is properly tagged and taken out of service.
- Ensure that if employees wear badges around their necks while operating machinery, that only breakaway badges are used. It is best to not have anything hanging from the neck when operating machinery.

Employees

- Comply with the machine guarding and training requirements directed by this procedure.
- Do not perform any task requiring formal training until the required training is completed, documented and current.
- Refuse to operate any piece of equipment for which they are not familiar and/or not properly trained.

Definitions:

- Belts – Belts include all power transmission belts, such as flat belts, round belts, v-belts, etc.
- Belt Shifter – A belt shifter is a device for mechanically shifting belts from tight to loose pulleys or vice versa or for shifting belts on cones of speed pulleys.
- Employee – Includes all permanent and temporary employees and Sub-contractor employees.
- Enclosures – Guarding by fixed physical barriers that are mounted on or around a machine to prevent access to moving parts.
- Exposed to Contact – An object or part is exposed to contact if it is located in such a way that a person is likely to come into contact with it and be injured.
- Fixed Shop Machinery – Fixed shop machinery is defined as any piece of machinery designed to perform work on material such as a drill press, bench grinder, table saw or lathe which is mounted or fixed to the floor or a table.
- Flywheel – Flywheels include flywheels, balance wheels, and flywheel pulleys mounted and revolving on crankshaft platform used for oiling, maintenance, running adjustment or repair work, but not as a passageway.
- Guard – An engineering control that uses either fixed or adjustable barriers to prevent personnel from contacting the moving parts of machinery or equipment.
- Interlocking – A type of guard that, when opened or removed, causes the machine's cycling mechanism or power to automatically shut off or disengage; the machine cannot be cycled or started until the guard is back in place.
- Machine – An assemblage of parts that transmit forces, motion and energy in a predetermined manner for performing a task.
- Nip-Point Belt and Pulley Guard – A nip-point belt and pulley guard is a device that encloses the pulley and is provided with rounded or rolled edge slots through which the belt or pulley passes.
- Point of Operation – The area on a machine where work is actually being performed upon the material being processed. On some machines, there may be more than one point of operation.
- Power Transmission Equipment – Horizontal or vertical belts or shafts, pulleys, gears, sprockets, couplings, chains, clutches, connecting rods, flywheels and other such equipment.
- Prime Movers – Include steam, gas, oil, and air engines, motors, steam and hydraulic turbines, and other equipment used as a source of power.

City of Council Bluffs Respiratory Protection Policy – B-22

The purpose of the Respiratory Protection Program is to protect employees against harmful dusts, fogs, fumes, mists, gases, smokes, sprays, bio aerosols and vapors through the use of engineering controls, administrative controls or personal protective equipment. If effective engineering or administrative controls are not feasible, respirator shall be provided by the City of Council Bluffs when such equipment is necessary to protect the health of the employee.

Definitions

- **Air Purifying Respirator** – a type of respirator with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

- **Atmosphere-supplying Respirator** – a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere and includes supplied air respirator and self-contained breathing apparatus units.

- **Canister or Cartridge** – a container with a filter, sorbent or catalyst or combination of these items, which removes specific contaminants from the air passed through the container.

- **Employee Exposure** – exposure to a concentration of an airborne contaminant that would occur if the employee were not using respirator protection.

- **Filter** – a component used in respirators to remove solid or liquid aerosols from the inspired air.

- **Fit Test** – a quantitatively or qualitatively evaluate the fit of a tight-fitting respirator on an individual.

- **Loose Fitting Face piece** – a respiratory inlet covering that is designed to form a partial seal with the face.

- **NIOSH Approval** – the approval of a respirator for worker protection by the National Institute for Occupational Safety and Health (NIOSH).

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

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

- **Self-Contained Breathing Apparatus (SCBA)** – at atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

- **Supplied Air Respirator (SAR) or Airline Respirator** – an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

- **Tight Fitting Face piece** – a respiratory inlet covering that forms a complete seal with the face.

Responsibilities

Departments with employees who are required to use respiratory protection shall:

- Develop and implement a written site-specific policy defining the use of respirators for each application.
- Facilitate employee medical clearance, training, competency validation and fit-testing.
- Notify Risk Management of any personnel changes in jobs requiring respiratory protection.
- Purchase appropriate respirator, cartridges and approved replacement parts for employees included in the respiratory protection program.
- Implement a program for cleaning and inspecting respirators each time they are used.
- Ensure that emergency use respirators are inspected once per month and maintain documentation of these inspections.
- Develop and implement a change schedule for cartridges for air-purifying respirators.
- Report any problems to Risk Management.

Employees who are required to use respiratory protection shall:

- Comply with department – or site specific policies on respirator use.
- Participate in medical clearance procedures, training sessions, and tests for competency validation and fit tests.
- Inspect their respirators before each use and clean them after use.
- Report any problems to their supervisors.
- Notify supervisor of any changes in medical condition or work practice that could impact their medical clearance for respirator use.

Supervisors shall:

- Recommend appropriate respirators and cartridges to the users for procedural purposes. Only NIOSH approved respirator will be used.
- Risk Management will assist each department that will require respirator use in developing a site-specific policy on respirator use, including the types of respirators to be used and cartridge change schedules and criteria for air-purifying respirators.
- Supervisors or their designee will conduct annual respirator fit testing for every employee assigned a task requiring the use of a tight-fitting respirator.
- Supervisors will see to it that employees receive annual respirator training, including competency validation for all employees who must wear respirators.
- Supervisors will maintain documentation of training, competency validation, medical clearance and fit testing and make this documentation available to other departments with employees on the respiratory protection program.
- Supervisors will conduct periodic monitoring to assess concentrations of airborne contaminants.
- Supervisors will conduct periodic reviews of policies and practices related to respirator storage and use.
- Suppliers of respirators are a good source of information concerning which type of respirator is needed and will normally perform the fit testing requirements.

Procedures

General

If an employee, supervisor or another employee suspects that a specific job task might require the use of a respiratory protective device, a comprehensive workplace review will be conducted. This assessment may include air monitoring to assess employee exposures to airborne contaminants. If an unsafe exposure situation exists, the feasibility of engineering or administrative controls will be considered. If these preferred methods of controlling exposure are not feasible, the respiratory protection program will be implemented as described below.

Health Evaluation

The use of a respirator may impose an additional stress on the worker. Each employee prior to being assigned to tasks requiring the use of a respirator, shall receive a health evaluation performed by a local clinic to determine that he or she is physically able to perform assigned tasks while wearing a respirator. This evaluation will be repeated at intervals if there is a change in the employees' medical condition or level of effort during tasks requiring respirator use.

Respirator Selection

Selection of appropriate respirators for the task the employee will be doing will be up to the supervisor with the advice of the provider of respirators to be assured the correct style of respirator is being selected for which the employee is being exposed to.

Fit Testing

All individuals required to use a tight fitting respirator must undergo quantitative fit-testing to ensure an effective mask to face seal. Individuals must be fit tested before initial use of their respirator and at least annually thereafter. The provider of respirators performing the fit test will provide the employee with information on the specific manufacturer, model and size of respirator, along with the type of cartridges needed, if applicable. The location supervisor will maintain necessary records of all fit tests for tight fitting respirators.

Preventive Condition

Tight fitting respirators shall not be worn when conditions prevent a good face seal. Such conditions include, but are not limited to, growth of a beard, sideburns, any piece of clothing that projects under the face piece or temple pieces on glasses. Only loose fitting respirators are acceptable under these conditions.

Respirator Use

Respirators will be used in accordance with specific procedures described in the manual provided by the manufacturer. Prior to use in a contaminated atmosphere, the user a tight fitting respirator will perform a positive and negative pressure fit check and adjust the mask until a good fit is achieved. Users of loose fitting respirators will assure adequate air flow to the respirator face piece before entering a contaminated atmosphere.

Maintenance

Each respirator user will have the responsibility for maintaining his/her respirator. Parts should be replaced when needed. Respirators intended for non-routine, general use will be maintained by the supervisor or a designated competent person.

Inspections

Respirators used daily will be inspected before and after each days use by the respirator wearer. Non routine use respirators will be inspected before and after each use and at least monthly. The supervisor will occasionally review records of the monthly inspection of SCBA's and the periodic inspection of air purifying respirators, PAPRs and supplied air respirators. Documentation of the inspection will be provided to the supervisor at the time of inspection. (The manual supplied with each respirator will provide specific inspection procedures).

Cleaning, Disinfection and Storage

Respirators will be cleaned and disinfected after each use according to procedures for specific respirators. After cleaning and drying, respirator will be stored away from any contamination in a clean, sanitary place on a flat surface in a sealed container. Respirators must not be exposed to extreme temperatures. It is not acceptable to hang a respirator by its straps.

Repair

Respirators needing repair will be repaired by the designated competent person using manufacturer approved replacement parts only or by the supplier of the respirators. Repairs must be made in a manner that maintains the respirator's NIOSH approval.

Emergency Use

The only respirator approved for entry into all contaminated atmospheres is a Self-Contained Breathing Apparatus (SCBA) used in the pressure demand mode. All individuals who will be required to wear an SCBA must be trained, tested and certified by the supervisor or provider of the equipment. Other types of respirators may be used for escape from contaminated atmospheres. Use of these respirators for emergencies shall be approved by your supervisor.

Worksite Specific Policies

All work areas where respirators are used must have site or task specific respirator policies. These policies must outline when respirators will be used, the types of respirators for each application, provisions for employees with beards or other preventive conditions, cartridge change schedules for air purifying respirators, storage locations for respirators and inspection/maintenance schedules for respirators that are not used routinely. They must also specify the responsibilities of respirator users, their supervisors and others who may be involved in respirator or cartridge ordering, recordkeeping and notification about new employees who will be required to wear respirators.

Training

Employees required to use respirators will receive initial and annual training, which will be conducted by the supervisor or supplier of respirators. These employees shall receive specific instructions related to the respirator they use and, when possible, the training will include practice in donning the respirator. The training will consist of instruction in selection, inspection, use and maintenance of respirators. Employees must be able to demonstrate knowledge of why the respirator is necessary, how to care for and use the respirator properly, how to recognize when the respirator is not functioning properly and general requirements of this respiratory protection policy.

Following this section is the mandatory Medical Evaluation Questionnaire and complete OSHA Standard 1910.134

City of Council Bluffs Inspection Safety Policy

The City of Council Bluffs has various divisions that conduct inspections of several different sites, businesses, buildings, construction sites, rental property inspections, rodent and pest control and housing rehabilitation projects. It is very important to conduct these inspections in a way that protects the employees from injury and enables them to do their job in a safe manner.

While City of Council Bluffs employees are doing these various inspections, there are certain safety policies they will need to follow.

Safety Policy

- While conducting an inspection, be visible and identifiable, wear a safety vest and have some type of marking identifying you as a person doing an inspection for the City of Council Bluffs.

- As a person doing an inspection, if the area you are inspecting has specific safety rules to follow, you should follow their policies if at all possible.

- Be aware of your surroundings, don't get in a situation where you could be bitten by a dog, don't get in a situation that a neighbor could mistake you for a trespasser, be observant in an area you could be ran over by equipment or any other situation that could be avoidable.

- While inspecting a job site that has over head construction going on, wear a hard hat.

- While inspecting a job site that is very noisy, wear hearing protection.

- While inspecting a job site that has construction going on, wear eye protection.

- While inspecting a job site wear work boots that have leather uppers with thick soles with treads to keep from slipping. Have overshoes to put on in the event area is muddy. Be aware of where you are walking so as to not step on any nails sticking out of boards or where you could have something fall on your feet. In areas away from construction sites, one needs to wear closed toed shoes with slip resistant soles.

- Have a rain suit to put on in the event you are working outside and its raining. Have overshoes to wear if you are in muddy conditions.

- Have appropriate types of gloves to wear that protect your hands from such things as cold weather or a hazardous chemical.

- Follow safe driving procedures; carry a fire extinguisher, first aid kit and a flash light in your vehicle.

- Speak with your supervisor on how to handle an irate citizen, find out what they prefer you do if this situation should arise.

- If you would have to park your vehicle on the shoulder of a road, be sure to put the 4 way flashers on to alert oncoming traffic and passing vehicles.

IOJ-INJURY /WORKERS' COMPENSATION INFORMATION

Below are the basic steps to follow when an injury occurs on the job.

INJURY

1. Assess injury and seek appropriate medical attention. (See Approved Medical Treatment Facilities list.)

2. Notify your supervisor or someone working with you who will notify your supervisor.

3. The employee must complete the First Report of Injury form and Council Bluffs Employee Injury Form within 48 hours. If the injured employee is unable to complete the First Report of Injury, their immediate supervisor shall complete the form within 48 hours of notification of the incident. The forms are located on the City of Council Bluffs' webpage under Human Resources/Risk Management.

4. The employee must obtain a City of Council Bluffs Doctor's certificate each time you receive medical treatment for an Injury on the Job, this will include any work restrictions. This form is located on the Council Bluffs' webpage under Human Resources/Forms.

5. The City of Council Bluffs will have alternative/light duty work for all employees during their recuperative time related to an Injury on the Job.

6. The employee must notify their supervisor and payroll clerk of any time off ordered by your doctor on their doctor's certificate, due to an Injury on the Job. They can help you accurately record your time.

PRESCRIPTIONS

When filling an IOJ prescription at a pharmacy, the employee should give the following:

Healthesystems phone number: 800-758-5779

Healthesystems BIN#: 012874

Claim Number (if they have it)

Berkley Risk phone number: 800-832-0137

PAYROLL

1. General employees may use time-off as defined in their respective contract for the first (3) days that they are not on their regularly scheduled shift. Workers' comp. pay will start paying for IOJ on the fourth calendar day. If the employee is still on IOJ after the fourteenth calendar day, work comp. will reimburse the employee the first (3) calendar days after the date of injury. Work Comp. pay is calculated by a State of Iowa formula and is not 100% of the employee's average weekly wage.

2. Police and Fire must record all IOJ time off with their payroll clerks.

HELP

All IOJ claims are managed by a third party administrator. They coordinate the claim file, payments, doctor visits, etc. Their contact information is:

Berkley Risk, 300 West Broadway, Council Bluffs, IA 51503. Phone: 800-832-0137.

These are general guidelines & information. If you need further help contact your supervisor or:

Gary Miller, Risk Manager
City of Council Bluffs
209 Pearl Street, Council Bluffs, IA 51503
Ph. 712-328-4688

APPROVED MEDICAL TREATMENT FACILITIES FOR ON THE JOB INJURIES

NON-EMERGENCY INJURY OR BLOOD-BORNE EXPOSURES:
West Broadway Clinic
1701 West Broadway, Council Bluffs, IA 51501
Phone 712-256-5600

Hours of Operation
Monday through Thursday 8:00 AM to 7:00 PM
Friday 8:00 AM to 5:00 PM
Saturday 9:00 AM to 1:00 PM

Identify yourself as a City of Council Bluffs employee

Treatment at this facility is required for non-emergency or blood-borne pathogen exposure for all City employees with the exception of, but recommended for, Fire and Police personnel covered under the Chapter 411 program.

EMERGENCY INJURY SITUATIONS AND AFTER HOURS:

911

Or

Jennie Edmundson Hospital Emergency Room
933 East Pierce Street
Council Bluffs, IA 51503
Phone 712-328-6111
Open 7 days a week 24 hours a day

Treatment outside the aforementioned facilities requires prior approval. Contact Risk Management at 712-328-4688 for approval and billing instructions.

REPORTS AND FORMS

All forms for injury and doctor's return to work are located on the City's webpage under Human Resources/Risk Management. Copies may be filled out and printed directly off of the website or ask your supervisor for copies.

C-02

Prescription Safety Glass Policy

The City of Council Bluffs will provide non-prescription safety glasses to employees whose job requires use of safety glasses, each department will have non-prescription safety glasses on hand to provide to employees. For prescription safety glasses, the supplier is:

Eye Specialists
1505 W. Broadway
Council Bluffs, Iowa
712-322-3097

Eye Specialists is the only approved place to obtain prescription safety glasses. You will need to take your current prescription and a signed prescription order form from your supervisor to Eye Specialists. Eye Specialists can do eye exams and City Vision Insurance will be honored provided the vision benefits are available to you and you have not used the benefit during the prior 12 months. Your supervisory will provide the necessary documentation needed by Eye Specialists to obtain the prescription safety glasses.

The purpose for this program is for eye protection not personnel eye glasses. The side shields cannot be removed and will provide the best form of eye protection. They are to be worn while working for the City of Council Bluffs if your job requires safety glasses. Jobs which require safety glasses include but are not limited to construction, mowing, weed trimming, mechanical work or any job where there is a danger of flying particles.

You have your choice of bifocal lenses, clear lenses or sunglass lenses. Keep in mind, your eye exams would be covered by your vision insurance. Safety glasses will only be replaced if your prescription changes and/or at least one year has passed from the time you obtained your prior safety glasses. Any on the job damage to safety glasses requires your supervisor to examine your glasses for damage and approve repair or replacement.

The City will not pay for no line bifocals or transition lenses (ones that change color). The cost for these upgrades must be paid by the employee to Eye Specialists at the time of the order. The City will pay Eye Specialists for the standard safety glasses and the employee can pay for any upgrades.

Please contact your supervisor or the Risk Manager with further questions. The supervisor has the form available for requesting safety glasses.

VEHICLE AND EQUIPMENT OPERATION AND ACCIDENT REPORTING

Vehicle Operation

1. Employees shall operate all vehicles and equipment in accordance with its designed use, taking into considerations traffic and other conditions surrounding the use of the vehicle or equipment and the safety of others.
2. Only licensed operators shall be permitted to drive or operate City vehicles and equipment. In the event an employee's license is suspended the employee must notify their department head immediately.
3. All drivers of City vehicles and equipment shall comply with all State, County, and local rules and regulations governing the safety and legal operation at all times.
4. Seat belts shall be worn and secured at all times.
5. The driver shall be responsible for assuring that all passengers are seated and properly secured before moving the vehicle. Under no circumstances shall passengers ride on the fenders, running boards, the tops of vehicles, or any place not designed for passengers. Employee drivers shall secure all doors and check seat belts prior to moving the vehicle. Extra caution should be used when closing sliding doors on vans or other type vehicles.
6. Trucks transporting materials or equipment shall secure the cargo to prevent movement in transport. All cargo that extends beyond the bed of a vehicle shall be clearly marked with a red cloth not less than sixteen (16) inches square.
7. Speed limits on public roads and highways shall be strictly observed by all drivers of City vehicles.

   EXCEPTION: Those employees engaged in emergency operations shall follow departmental procedures in regards to speed limits.
8. Lights, brakes and so forth shall be checked before leaving the vehicle at the end of the working day. Any malfunction of the vehicle shall be reported to the immediate supervisor no later than the end of normal working day.
9. A safety check of equipment should be repeated at the beginning of each work shift to assure equipment is in safe working order and that necessary repairs have been made.
10. Lights and safety chains shall be checked for proper operation before towing any equipment. All towed equipment shall be equipped with safety chains and proper hitches.
11. The fueling of equipment such as lawnmowers, loaders, graders, tractors, etc., shall be done when equipment is cool and with the engine off. Smoking is prohibited while refueling or checking batteries.
12. Proper emergency equipment is to be stored and in usable condition in all vehicles requiring such equipment (flares, fire extinguishers, first aid kits, etc.). All employees who drive such vehicles are responsible for determining that emergency equipment is available and in working condition.
13. Entertainment headsets of any type shall not be worn during the operation of any vehicle or equipment.

C-03

REPORTING VEHICLE and EQUIPMENT DAMAGE

In the event you are involved in a motor vehicle accident or a property damage accident involving city owned property, the following procedures apply;

1. Stop immediately and turn on any emergency warning devices as needed.
2. Immediately notify the appropriate authorities (911) and then notify your immediate supervisor. The supervisor will assess the situation and will gather pertinent accident details.
3. Do not leave the scene of the accident or move the vehicle except when the vehicle is creating a definite hazard.
4. Render any aid or assistance to anyone injured, if qualified. If an ambulance is needed or required, notify 911 accordingly.
5. Obtain any information from witnesses including names, addresses and contact information for future reference.
6. Do not admit or deny responsibility for the incident at the scene.
7. Within 24 hours of the accident assist your supervisor in completing the City's Motorized Vehicle Investigation Report, the current copy is locating on the City's website under the Risk Management tab.

The City's Motorized Vehicle Investigation Report form is located on the City's home page under the Risk Management Tab.

CITY OF COUNCIL BLUFFS

MOTOR VEHICLE ACCIDENT REVIEW PROGRAM

Purpose

- It is the policy of the City that every employee is entitled to work under the safest conditions possible. To this end, every reasonable effort will be made to promote accident prevention for protection and health preservation. The City believes that most accidents can be prevented by taking common sense precautions.
- Due to the large number of activities in progress at one time, the varied nature of the work, and the widespread location of such activities, it is desirable to "formalize" our Motor Vehicle Accident Review Program, utilizing written reports and records, to achieve the maximum benefit and effectiveness of loss control information.

Scope

- The primary objectives of this program are to initially reduce and then maintain the lowest possible level of vehicle accidents and to promote safety. In order to realize the objectives of this program, the following goals have been established:
  - To actively review all accidents involving City vehicles to document and analyze the cause of each incident and to outline preventive measures.
  - To comply with all established safety and health standards set forth by State and Federal statutes.
  - To minimize the exposures incurred both directly and indirectly as a result of unsafe conditions or actions.

Policy

- A vehicular accident is any accident involving a City-owned or operated vehicle (i.e. self-propelled, motor-driven) which results in property damage, and/or personal injury regardless of who is injured, what property was damaged, to what extent, or where it occurred. Note: Mailboxes damaged during snow removal are not considered accidents unless damage is incurred by the vehicle itself.

Vehicle Accident Reporting Procedure

- An employee that is involved in a vehicle accident should follow the procedure below to ensure that the proper individuals are informed.
  - The driver of a vehicle which is involved in an accident resulting in injury, death, or damage to persons or property shall immediately, by the quickest means of communication, give notice of the accident to the local enforcement body having jurisdiction over the area of the accident (i.e. the Police Department on public right-of-ways).
  - The driver of the vehicle which is involved in an accident shall immediately, by the quickest means of communication, notify his/her supervisor. Note: Once notified, it will be the supervisor's responsibility to initiate the Accident Review Procedure and to assess the accident.
  - The driver of the vehicle involved in an accident, regardless of damages, must complete the Equipment Accident Report within 24 hours of the accident, and submit copies of the report to his/her superintendent, who in turn will forward copies to the Department Head, City Risk Manager, and the Department Safety Officer.

Safety Committee

- Each Department will establish and schedule their own Safety Committee Meetings
- The Safety Committee of each department will be responsible for administering the Motor Vehicle Accident Review Program and ensuring that the primary objectives of this Program are met. The Committee will consist of the following personnel:
  - The Director of each Department
  - The City Risk Manager
  - The Safety Officer of each Department
  - Superintendents of each Department

Review Procedure

- **Step One –** Accidents will be reviewed by the Department Safety Committee at the regularly scheduled safety meeting.
- **Step Two –** The review of an accident by the Safety Committee will determine if it is a chargeable or non-chargeable offense.
- **Step Three –** Once the status has been determined by the Safety Committee, the Director of the Department or his assigned representative will communicate in writing the points to be assessed, if any, to the affected employee, based on the matrix in the Point Section, and any disciplinary action to be taken.

Points

- The following criteria are to be used when evaluating motor vehicle accidents. It applies only if the accident was avoidable had reasonable steps been taken by the employee.
  - **2 Points** – The accident involved motor-driven, City-owned equipment or equipment operated for City business. The accident resulted in property damage to equipment or facilities. It was the result of either shared responsibility on the part of the operator(s) or a violation(s) of safe operating practices. Does not involve violation(s) of Rules and Regulations, City Policy, City Ordinances, or State Law.
  - **4 Points** – The accident involved motor-driven, City-owned equipment or equipment operated for city business. The accident resulted in property damage to equipment or facilities. The accident was avoidable. Involves violation(s) of Rules and Regulations, City Policy, City Ordinance, or State Law.
  - **6 Points** - The accident involved motor-driven, City-owned equipment or equipment operated for city business. The accident resulted in personal injury to either the employee or private citizen. The accident was avoidable. Involves violation(s) of Rules and Regulations, City Policy, City Ordinance, or State Law.
  - **8 Points** - The accident involved motor-driven, City-owned equipment or equipment operated for city business. The accident resulted in personal injury, which was apparent or substantiated within a reasonable period of time, resulting in lost time incurred by either the employee or private citizen. The accident was avoidable. Involves violation(s) of Rules and Regulations, City Policy, City Ordinance, or State Law. Note: In determining an 8 point assessment, lost time means a physician's release from duty due to an injury or injuries sustained in the accident.
- It is understood that employees are sometimes required to operate City-owned or operated equipment in hazardous conditions (e.g. plowing snow in a blizzard with zero visibility). In these situations the point assessment may be reduced by 50%.

Assessment Matrix

- In determining the point assessment and the corresponding discipline, if any, the number of accidents(s) must be considered. The following matrix is designed to guide this decision making process.
- It is understood that the Department Director will review each serious offense. The Director has the discretion to take action above and beyond the matrix up to and including termination.

Offense – Accidents in the Past 18 Months

Points	1st	2nd	3rd	4th	5th	6th
8 points	3 days Suspension or Termination (8)*	Min. 5 day Suspension or Termination (16)*	Termination (24)*			
6 points	1 day Suspension (6)*	3 days Suspension (12)*	Min. 5 day Suspension (18)*	Termination (24)*		
4 points	Written Warning (4)*	1 day Suspension (8)*	3 days Suspension (12)*	Min. 5 day Suspension (16)*	Termination (20)*	
2 points	Verbal Warning (2)*	Written Warning (4)*	1 day Suspension (6)*	3 days Suspension (8)*	Min. 5 day Suspension (10)*	Termination (12)*

*** Total accumulated points within the past 18 months.**

Example: The matrix system works on the principle of total accumulated points in an 18 month period. For example, consider the accident history of this employee:

Offense	Date	Points	Accumulated Points	Action Taken
1	1/7/15	2	(2)	Verbal Warning
2	7/1/15	4	(6)	Written Warning
3	1/3/16	6	(12)	3 day suspension
4	5/30/16	4	(16)	5 day suspension

With each offense you would first look at the column corresponding to the offense and then go down the column to the cell containing the accumulated point total of the employee.
Note: If the accumulated points fall in between those listed in a column, the action taken will be that listed in the lower cell.
Employees will be moved back one step in disciplinary action due for each 18 month period during which they are not involved in an accident.

Suspension

- Any suspension resulting from an accident shall be without pay. The Department Director does have discretion in determining the terms of the suspension, as follows:
    - If in the best interest of the City, the Department Director can defer or spread a suspension over a period of time. For example, if an employee was entitled to a 3 day suspension, but the demands or

schedule were such that the employee's presence was needed, the supervisor could require that one day be taken the next week and two days the following week.

Intentional Failure to Report

- An intentional failure to report a motor vehicle accident by any employee or supervisor shall result in a mandatory 3 day suspension, which is in addition to any other assessment resulting from the accident.

Distribution

- All Department superintendents, all regular full-time and part-time employees, and volunteers.
- Effective date for this policy shall be upon adoption with review of accidents for the following month.