SECTION 10 – HEALTH AND SAFETY

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10-101 HEALTH AND SAFETY

101.1 OBJECTIVES

For the benefit of employees, citizens and businesses alike, it is the objective of the City of Gardner to prevent loss of life, limb and property by having all work performed in a safe and efficient manner. Additionally, the general health, welfare, and safety awareness of employees will reap benefits outside the work environment in their daily lives.

This policy applies to all City employees (including full-time, part-time, and temporary employees).

101.2 GENERAL RULES

The City recognizes accident prevention as an essential part of every employee's job, and expects all work to be carried out in a safe manner in order to prevent injuries either to employees or other persons, damage to property, or interruption of service.

Responsibility and authority for the action necessary to prevent accidents rest with the immediate supervisor as an integral part of the job. The City Administrator, Department Directors, and supervisors will provide constant leadership and encouragement for preventing accidents to the first level supervisors and through them to employees.

Employees will be provided necessary training and informational sessions regarding health and safety measures that will further reduce the risk of accidental loss in the work place.

It should be easier to prevent an accident than to report one.

101.3 IMPLEMENTATION

Assistance should be provided to the members of the organization by the interdepartmental Safety Committee. The Committee can assist in planning and carrying out many activities for accident prevention. Care must be exercised to point out that both the Committee and any safety specialists are aids. They cannot assume a supervisor's or employee's responsibility for accident prevention.

101.4 EMPLOYEES RESPONSIBILITY

Employees should know, accept and apply the City's accident prevention policy. To carry this out, employees should:

a) Know and use safe and effective methods of doing their jobs;

b) Recognize and respect the hazards encountered;

c) Have confidence in their own abilities, not fear of the work;

d) Take pride in safety and safe practices;

e) Take pride in new devices and methods;

f) Be anxious to learn;

g) Seek to guard their own lives and help others whenever possible;

h) Be team workers and cooperate fully; and report potential hazards to the supervisors with no fear of job discipline for providing such information.

Supervisors should know and apply the City's accident prevention policy and establish the same knowledge, acceptance, and application of this policy among the people they supervise. The supervisor's planning, assigning, and control of work should include these specific activities which will help prevent accidents:

a) Observe work methods and habits continually and take corrective action or praise, as appropriate, in all cases.

b) Correct unsafe conditions before accidents occur.

c) Tell employees how they are doing in planned contacts. Discuss accidents and reward the absence of accidents, along with other factors in the employee's performance evaluations.

d) Set good habit and attitude examples.

e) When an accident does occur, make a complete investigation of causes and take action for future prevention.

f) Encourage employees to report all potential hazards with no criticism of, or job discipline resulting to, the employee regardless of the validity of the information.

g) Prepare budgetary requests necessary to provide required equipment or training.

Department Directors, in addition to providing general leadership for accident prevention, should provide through training, assistance to supervisors, including the following:

a) A review of accidents most likely to occur.

b) Why the supervisor is responsible for safety.

c) Accident causes and their control.

d) Interviewing and counseling techniques with individuals.

e) Preparation of complete cause and corrective action reports for each accident that causes or could cause injury. Rejection of alibis or justification for accidents.

f) Arrangements for analysis of accident records, including traffic accidents involving each employee and each supervisor.

g) Reward good safety records and practices in performance evaluations.

h) Prepare budgetary requests necessary to provide required equipment or training.

10-102 ON THE JOB INJURY

102.1 REPORTING AN INCIDENT

It is the responsibility of the employee to immediately report any on the job accident or injury to the supervisor. State Worker's Compensation regulations will be used to determine a work-related injury or illness. The injured employee, supervisor, and witnesses, if any, must complete the appropriate accident report forms.

The supervisor, in cooperation with Human Resources, will authorize appropriate medical care if any will be required. The City is responsible for payment of all authorized medical treatment related to an on-the-job injury or illness.

The City may require any employee to undergo drug and alcohol testing as soon as practical after a work-related injury or accident. An injury form must be completed by

the supervisor and provided to Human Resources within 24 hours of the work-related injury or accident.

Under Kansas law, the City is responsible for providing each injured employee with a Form K-WC27 which explains an injured employee's duties and responsibilities under Kansas Workers' Compensation laws.

102.2 INVESTIGATION

The injured employee's supervisor is responsible for ensuring that a full investigation of every accident is accomplished. The supervisor or his/her designee will initiate the investigation which requires obtaining information from the involved employee and any witness through interviews, observing and taking pictures of the accident site, and gathering any other pertinent or contributory information, and determining what, if any, corrective action should be taken to prevent a similar situation from occurring in the future.

102.3 LOST TIME INCIDENTS

102.3.1 Compensation

When a full-time or part-time employee must miss work due to an on-the-job injury or illness the employee may elect to utilize accrued sick leave and/or other leave to augment Worker's Compensation benefits up to 100% of salary.

102.3.2 Benefits

Employees shall be entitled to those benefits as provided by Worker's Compensation. All benefits normally available to the employee will continue as normal for as long as the employee continues to be an employee of the City. Employees may also qualify for leave under the Family Medical Leave Act provided they meet the eligibility requirements.

102.3.3 Other Provisions

Employees must follow the course of treatment set out by the assigned medical practitioner and must provide related documentation to the City. During time that an employee is absent from work due to an on-the-job injury or illness, the employee should contact their supervisor at least weekly and always after each appointment with a health care provider to keep the supervisor updated on the status of their condition and projected return to work date.

102.4 RETURN TO WORK

Employees who have not been fully released, but who have been released with restrictions, may be required to come back to work to perform tasks that they are physically able to perform. All such decisions will be made with the approval of the health care provider, the Department Director, and City Administrator.

Restricted duty is designed to be a bridge for employees who are temporarily disabled and is in no way to be construed as a regular assignment, lateral transfer, promotion, or demotion. Restricted duty will be provided only where the limitations are temporary. Normally the employee will be assigned restricted duties within his or her regular department. There may be times, however, when the employee may be temporarily reassigned to another department based on the needs of the department.

An evaluation and prognosis will be requested from the treating health care provider for any employee who is unable to return to their regular duties within ninety (90) days after an on-the-job injury or illness. A decision will be made regarding how long the individual's position can be held open, based on the prognosis provided and the needs of the department.

If it is determined that an employee who reaches maximum medical improvement is unable to perform the essential functions of his or her position, the City will make every reasonable effort to accommodate the employee in the position or in another vacant position, if available. There are no guarantees, however, that an accommodation can be made or that a position will be available.

An employee shall return to work upon being released by the treating health care provider with a statement indicating that the employee is able to perform all of the essential functions of the position.

If an employee must receive subsequent treatments due to his or her on the job injury after returning to work, time off for such treatment shall be documented on the employee's time sheet as worker's compensation leave and will not be charged to the employee's sick or vacation leave. Leave may qualify as leave under the Family Medical Leave Act (FMLA) if the employee meets the eligibility requirements.

10-103 PERSONAL PROTECTIVE EQUIPMENT (PPE)

103.1 POLICY

It is the policy of the City of Gardner to conduct a Personal Protective Equipment Program following provisions of the Occupational Safety and Health Administration (subpart 1 of 29 CFR 1910.132 through 140 as amended). The objective is to protect employees from injuries by assessing the workplace for hazards that can be controlled by use of personal protective equipment or by other means.

103.2 GENERAL REQUIREMENTS

The City of Gardner shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the City shall:

a) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;

b) Communicate selection decisions to each affected employee; and

c) Select PPE that properly fits each affected employee.

The City of Gardner shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, the date(s) of the hazard assessment, and, which identifies the document as a certification of hazard assessment.

Defective and damaged personal protective equipment shall not be used.

The City of Gardner shall provide training to each employee who is required by this section to use PPE. Each such employee shall be trained to know at least the following:

a) When PPE is necessary;

b) What PPE is necessary;

c) How to properly don, doff, adjust, and wear PPE;

d) The limitations of the PPE; and

e) The proper care, maintenance, useful life and disposal of the PPE.

Each affected employee shall demonstrate an understanding of the training specified in Section 10, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

When the City of Gardner has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by Section 10, the employer shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

a) Changes in the workplace render previous training obsolete; or

b) Changes in the types of PPE to be used render previous training obsolete; or

c) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

The City of Gardner shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained, the date(s) of training, and that identifies the subject of the certification. This certification shall be submitted to Human Resources.

PPE alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound work practices.

103.3 EYE AND FACE PROTECTION

Each affected employee shall use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

Each affected employee shall use eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

Each affected employee who wears prescription lenses while engaged in operations that involve eye hazards shall wear safety frames with prescription safety lenses or other eye protection that can be worn over regular prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

The City of Gardner shall provide for and pay the actual cost of the protective eyewear for affected employees who wear prescription lenses, including safety frames and prescription safety lenses, if funds are available, up to a maximum amount of $150.00 per pair (excluding any applicable sales taxes).

Affected employees who wear prescription lenses shall be responsible for the cost of the vision exam. The City will replace prescription safety lenses when necessary, if funds are available, with verification from an authorized vision service provider that such a change in prescription is necessary.

Safety frames and/or prescription safety lenses damaged while on duty or worn beyond their intended use will be replaced, if funds are available, at the City's expense, with safety frames and/or prescription lenses of equal value up to a maximum amount of $150.00 per pair (excluding any applicable sales taxes).

Safety frames and/or prescription safety lenses damaged while away from work or from obvious abuse shall be replaced at the employee's expense.

Eye and face personal protective equipment shall be distinctly marked to facilitate identification of the manufacturer.

Each affected employee shall use equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

Protective eye and face devices shall comply with ANSI Z87.1-1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection," or be shall be demonstrated to be equally effective.

103.4 HEAD PROTECTION

Each affected employee shall wear a protective helmet when working in areas where there is a potential for injury to the head from falling objects.

Each affected employee shall wear a protective helmet designed to reduce electrical shock hazards when working near exposed electrical conductors that could contact the head.

Protective helmets shall comply with ANSI Z89.1-1986, "American National Standard for Personal Protection – Protective Headwear for Industrial Workers", or shall be demonstrated to be equally effective.

103.5 FOOT PROTECTION

Each affected employee shall wear protective footwear.

Protective footwear shall comply with ANSI Z41-1991, "American National Standard for Personal Protection – Protective Footwear," or shall be demonstrated to be equally effective. The type of footwear purchased shall be appropriate for the working conditions.

Exception to specifications may be granted when clear medical documentation can be provided that these specifications are medically unacceptable to an individual employee.

The City of Gardner shall provide for and pay the actual cost of the protective footwear, if funds are available, up to a maximum amount of $120.00 per pair of shoes/boots (excluding any applicable sales taxes). EXCEPTION: The Department Director may authorize a higher maximum amount for highly specialized footwear required to protect from specific hazards, i.e. lineman's boots.

Protective footwear damaged while on duty or worn beyond its intended use will be replaced, if funds are available, at the City's expense with an equal value shoe/boot up to a maximum amount of $120.00 per pair (excluding any applicable sales taxes).

Protective footwear damaged while away from work or from obvious abuse shall be replaced at the employee's expense.

103.6 HAND PROTECTION

The City of Gardner shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.

The City of Gardner shall base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

103.7 HEARING PROTECTION

Employees shall use hearing protection whenever there is the possibility of exposure to loud or sustained noise. A noise level equal to or exceeding an 8-hour time-weighted average sound level of 85 decibels requires wearing ear protection. A noise level survey shall be accomplished on a periodic basis to evaluate the noise exposure. If new equipment is added or equipment is removed from a location, a noise survey shall be done to update the exposure rating. Each department is responsible for providing appropriate hearing protection and for developing specific requirements regarding the use of hearing protection.

103.8 CLEANING AND MAINTENANCE

PPE shall be inspected, cleaned, and maintained at regular intervals so that the PPE provides the requisite protection. Contaminated PPE that cannot be decontaminated shall be disposed of in a manner that protects employees from exposure to hazards.

10-104 BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

104.1 PURPOSE

The purpose of this policy is to set out the guidelines and procedures of the City of Gardner to limit potential occupational exposure to blood and other potentially infectious materials since any exposure could result in transmission of bloodborne pathogens that could lead to disease or death.

104.2 SCOPE

This policy covers all employees who could be "reasonably anticipated", as a result of performing their job duties, to face contact with blood or other potentially infectious materials. "Good Samaritan" acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure.

104.3 DEFINITIONS

The following provide further clarification of terminology used in this plan:

Blood: Human blood, human blood components and products made from human blood.

Bloodborne Pathogens: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Contaminated: The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: Laundry that has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps: Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination: The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Engineering Controls: Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the work place.

Exposure Incident: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Hand Washing Facilities: A facility providing an adequate supply of running potable water, soap, and single use towels or hot air drying machines.

Licensed Health Care Professional: A person whose legally permitted scope of practice allows them to independently perform the activities required for hepatitis B vaccination and post-exposure evaluation and follow-up.

HBV: Hepatitis B virus. The Disease: Hepatitis B is a communicable disease spread by a virus (HBV) that causes inflammation of the liver. There is no known cure for this disease. The virus is found in the blood and liver of infected patients and can be transmitted through contact with the blood or body fluid of an infected person as well as contact with contaminated needles, clothing or any other objects containing the blood or body fluids of an infected person. Persons with the disease need blood tests and evaluation by a physician at regular intervals even if they are without symptoms. Blood tests diagnose the disease and determine the stage of illness. The physician will advise if additional precautions are needed to prevent the spread of the disease to others. The only cure of hepatitis B is prevention.

Symptoms of Illness:

The symptoms appear gradually over a period of time and include:

a) Loss of appetite.

b) Vague abdominal discomfort.

c) Development of jaundice (yellowing of skin or eyeballs).

d) Nausea or vomiting.

e) Slight or no fever.

Mode of Spread of Disease:

a) The virus is found in blood, and to as lesser extent in saliva, urine, semen and vaginal fluids.

b) The virus can spread through sexual contact or by use of blood contaminated needles or syringes.

c) Many persons may have the virus in their blood without having symptoms.

Incubation Period:

The length of time from exposure to the onset of the illness is 45 to 180 days with an average of 60 to 90 days.

Period of Communicability:

Most cases of hepatitis B recover completely in a few weeks. They may spread the disease to others for several weeks before they become ill and until their symptoms resolve. A few cases of hepatitis B may become chronic carriers and may have liver problems. They may spread the virus to others for several years or possibly a lifetime.

Prevention of Spread:

Use these precautions al long as the virus is present in the blood:

a) Alert all medical and dental personnel that you are a hepatitis B carrier so they may use precautions for disposing of needles and other materials contaminated with blood.

b) Inform persons performing ear piercing, tattooing or acupuncture.

c) Do not donate blood.

d) Do not share razors, toothbrushes, waterpicks, fingernail files or clippers.

e) If an individual becomes pregnant, she should inform the obstetrician that she is a carrier. The physician might consider immunizing the child at the time of delivery for protection against the disease.

f) Inform all sexual contacts. Regular sexual partners should consider having their blood tested to see if they are positive for the virus. If not, a vaccine is available for protection against the disease.

g) There is less risk of spreading the infection to other household contacts and children. They need to consult with their physician regarding their need for vaccination.

HIV: Human immunodeficiency virus. The Disease: 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 and perinatally from mother to neonate. Transmission of HIV occurs via four modes:

a) Sexual contact involving exchange of body fluids (blood, semen or vaginal secretions);

b) Sharing contaminated needles and syringes;

c) Transfusion of blood or blood products contaminated by HIV or contact with HIV-contaminated blood to mucous membranes or non-intact skin.

d) Transmission from infected mothers to their infants.

HIV infections are not easily transmitted. There is no evidence that HIV is spread by casual contact. Since medical history and examination cannot reliably identify all individuals with HIV or other bloodborne pathogens, blood and body fluid precautions should be consistently used for all clients. Basic aseptic techniques practiced by personnel in conjunction with routine practices to limit blood contact can prevent HIV transmission in the healthcare setting. "Universal precautions" should be used in the care of all staff and clients, especially those in emergency care settings in which the risk of blood exposure is increased and the infection status of the patient is usually unknown.

Employees with impaired immune systems resulting from HIV infection or other causes are at increased risk of acquiring or experiencing serious complications of infectious disease. Of particular concern is the risk of severe infection following exposure to infectious diseases that are easily transmitted if appropriate precautions are not taken. Any employee with an impaired immune system should be counseled about the potential risk associated with any transmissible infection and should continue to follow

existing recommendations for infection control to minimize risk of exposure to other infectious agents.

Occupational Exposure: Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials: The following human body fluids:

a) Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

b) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

c) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; as well as blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral: Piercing mucous membranes or the skin barrier through such events as needle-sticks, human bites, cuts, and abrasions.

Personal Protective Equipment: Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Source Individual: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Universal Precautions: An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body

fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls: Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

104.4 RESPONSIBILITIES

The City Administrator has the ultimate responsibility for all biological safety issues. To ensure effective implementation of this occupational exposure control policy, individuals in the following categories must perform the duties and responsibilities assigned to them:

104.4.1 Exposure Control Officer (ECO)

The Human Resources Manager has been designated the Exposure Control Officer for the City of Gardner. The Exposure Control Officer administers the City's overall bloodborne pathogen compliance program. The ECO may be contacted in person at City Hall or by phone at 913-856-7535. Typical duties of the Exposure Control Officer include, but are not limited to:

a) Implementing the Bloodborne Pathogens Occupational Exposure Control Policy for the City of Gardner.

b) Working with other Department Directors and employees to develop and administer additional bloodborne pathogen-related policies, practices and training as needed to effectively implement this policy.

c) Review and update the Occupational Exposure Control Plan at least annually or more often if necessary to accommodate workplace changes.

d) Act as City liaison during compliance inspections.

104.4.2 Department Directors and Supervisors

Department Directors and supervisors are responsible for occupational exposure control in their respective areas. They work with the Exposure Control Officer and their employees to ensure adherence to the Bloodborne Pathogen Exposure Control Policy. This includes providing the proper training and personal protective equipment for employees and disciplining for any violations of this policy.

104.4.3 Education/Training Coordinator

The Education/Training Coordinator provides all employees with the potential for exposure to bloodborne pathogens information on bloodborne pathogens and training on how to protect themselves from exposure. The Human Resources

Manager will perform the duties of the Education/Training Coordinator. Responsibilities of the coordinator include, but are not limited to:

a) Maintaining a list of personnel requiring training.

b) Developing and scheduling suitable education/training programs and reviewing programs as necessary to include new information.

c) Maintaining appropriate training documentation and record keeping.

104.4.4 Employees

The ultimate execution of the bloodborne pathogen occupational exposure control policy rests in the hands of the City employees. Their responsibilities include but are not limited to:

a) Realizing the potential for exposure to bloodborne pathogens in certain tasks and job duties.

b) Attending the bloodborne pathogens training sessions.

c) Conducting all work-related operations and behaviors in accordance with work practice controls and procedures.

d) Developing good personal hygiene habits.

104.4.5 Exposure Determination

The City has identified the following job classifications where occupational exposure to blood may occur, without regard to the use of personal protective equipment.

Parks and Recreation Department

Parks and Recreation Director

Parks Maintenance Worker

Parks Maintenance Supervisor

Athletic Supervisor

Recreation Specialist

Facility Supervisor

Official

Pool Manager

Lifeguards

Public Safety Department

Public Safety Director

Public Safety Captain

Public Safety Sergeant

Public Safety Officer

Public Safety Reserve Officer

Animal Control Officer

Volunteer Fire Fighter

Public Works Department

Public Works Maintenance Worker – Line

Public Works Maintenance Lead – Line

Public Works Maintenance Worker - Streets

Public Works Maintenance Lead – Streets

Public Works Operations Manager

Water/Wastewater Manager

Wastewater Treatment Plant Operator

Wastewater Maintenance Worker

Plant Supervisor - Wastewater

Water Treatment Plant Operator

Plant Supervisor – Water Treatment

Water Maintenance Worker

Finance Department

Meter Reader/Technician

104.4.6 Universal Precautions

Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. According to the concept of universal precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens regardless of the perceived status of the source individual. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

Gloves and/or other appropriate barrier precautions must be used by all employees whenever contact with blood, other potentially infectious materials, mucous membranes, or non-intact skin or items or surfaces obviously contaminated with blood or other potentially infectious materials is anticipated during conduct of normal operations. Face shields or protective eyewear and mask should be worn when assisting a person with bleeding wounds or other serious bleeding.

Hands and other skin surfaces should be washed immediately and thoroughly (for at least two minutes) with water and antiseptic cleanser if contaminated with blood or other potentially infectious materials. Hands should be washed immediately after gloves are removed.

Employees must take precautions to prevent injuries caused by needles, syringes, scalpels and other sharp instruments and objects during their work duties.

Mouthpieces, resuscitation bags, or other ventilation devices will be available to those employees who may reasonably be expected to perform CPR.

Clothing which becomes contaminated with blood or other potentially infectious materials during operations should be removed immediately (or as soon as possible) and separated from other clothing by placing in a red bag or other properly labeled container until properly laundered.

Areas and equipment that become contaminated with blood or other potentially infectious materials should be cleaned immediately with a bleach solution (1:10 dilution of household bleach).

Pregnant employees should review safety procedures with their physician and their Department Director.

104.4.7 Engineering And Work Practice Controls

Engineering and work practice controls will be utilized to eliminate or minimize exposure to employees throughout the City of Gardner. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be utilized.

Hand-washing facilities are located in the following areas and are available to employees who incur exposure to blood or other potentially infectious materials:

City Hall	120 E Main	Restrooms, Break Room
Public Safety # 1	440 E Main	Restrooms, Break Room
Public Safety # 2	29000 W 183rd	Restrooms, Kitchen
Public Works Maint	329 Meadowbrook	Restrooms, Break Room
Parks & Rec Maint	111 Elm	Restrooms, Break Room
Hillsdale Water Plant	22705 Moonlight	Restrooms, Break Room
Wastewater Plant	32101 W 159th	Restrooms, Break Room
Celebration Park	32501 W 159th	Restrooms, Concessions
Westside Park	321 Bedford	Restrooms, Concessions
Aquatic Center	215 N Center	Restrooms, Concessions
Energy Center	1150 E Santa Fe	Restrooms, Break Room
Distribution Center	1450 E Santa Fe	Restrooms, Break Room

If hand-washing facilities are not available at a remote site, the City will provide either an antiseptic cleanser in conjunction with clean cloth/paper towels, or antiseptic towelettes. If these alternatives are used, then the hands are to be washed with soap and running water as soon as feasible.

After removal of personal protective gloves, employees shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water. If employees incur exposure to their skin or mucous membranes then those areas shall be washed or flushed with water as appropriate as soon as feasible following contact.

City departments that must provide alternatives to readily accessible hand-washing facilities will ensure the available supply and accessibility of these alternatives.

104.4.8 Work Area Restrictions

In work areas where there is a reasonable likelihood of exposure to blood or other potentially infectious materials, employees are not to eat, drink, apply cosmetics or lip balm, smoke, or handle contact lenses. Food and beverages are not to be kept in refrigerators, freezers, shelves, and cabinets or on counter tops or bench tops, or in vehicle passenger compartments where blood or other potentially infectious materials are present.

Contaminated reusable sharps are to be placed in appropriate containers immediately, or as soon as possible after use. The sharps container shall be puncture resistant, labeled with a biohazard label, and be leak proof.

Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

All procedures will be conducted in a manner that will minimize splashing, spraying, splattering and generation of droplets of blood or other potentially infectious materials.

104.4.9 Specimens

Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during the collection, handling, processing, storage, and transport of the specimens.

The container used for this purpose will be labeled or color-coded in accordance with OSHA standard.

Any specimens that could puncture a primary container will be placed within a secondary container that will be puncture-resistant and properly labeled.

If outside contamination of the primary container occurs, the primary container shall be placed within a secondary container, which prevents leakage during the handling, processing, storage, transport, or shipping of the specimen.

104.4.10 Contaminated Equipment

Equipment that has become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary unless the decontamination of the equipment is not feasible. An appropriate biohazard warning label must be attached to any contaminated equipment, identifying the contaminated portions and all information regarding the remaining contamination must be conveyed to affected employees, the equipment manufacturer and the equipment service representative prior to handling, servicing, or shipping.

104.4.11 Personal Protective Equipment

All required personal protective equipment used at the City of Gardner will be provided without cost to the employees. Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees' clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used.

The Department Director or their designated subordinate shall ensure that appropriate personal protective equipment and clothing is available and provided as needed.

All employees are to be trained regarding the use of the personal protective equipment for their job classification and tasks/procedures they perform. Initial training about personal protective equipment is conducted during a new employee's orientation. Additional training is provided when necessary if an employee takes a new position or new job functions are added to their current position.

All personal protective equipment will be cleaned, laundered and disposed of by the city at no cost to the employees. All repairs or replacements will be made by the city at no cost to employees. This does not apply to reusable protective equipment intentionally or negligently damaged or destroyed by the employee.

All garments that are penetrated by blood or other infectious materials shall be removed immediately or as soon as feasible. All potentially contaminated personal protective equipment will be removed prior to leaving the work area or accident/incident site, if possible. The employee will place all contaminated clothing in appropriately labeled bags. Personal protective equipment will be placed in red plastic bags. The supervisor in charge of the work site will be responsible for ensuring that all contaminated personal protective equipment and clothing are in appropriate containers until clothing can be laundered and equipment decontaminated.

Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, or mucous membranes and when handling contaminated items or surfaces. Gloves will be available from each Department Director or their designated subordinate.

Disposable gloves are to be replaced as soon as practical after contamination or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for reuse provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

Masks in combination with eye protection devices such as goggles or glasses with a solid side shield, disposable full face protection, or chin length face shields are required to be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious or hazardous materials may be generated and eye, nose, or mouth contamination can reasonably be anticipated.

Appropriate protective clothing is to be worn whenever potential exposure to the body is present.

CFR1910.1030(d)(3)(ii) provides for a limited exemption from the use of personal protective equipment based on situations in which use of personal protective equipment would prevent the proper delivery of health care or public safety services or would pose an increased hazard to the personal safety of the worker. The following represents examples of when such a situation could occur:

a) A sudden change in patient status occurs such as when an apparently stable patient unexpectedly begins to hemorrhage profusely, putting the patient's life in immediate jeopardy.

b) A fire fighter rescues a non-breathing individual from a burning building and discovers that their resuscitation equipment is lost/damaged and they must administer CPR.

c) A bleeding suspect unexpectedly attacks a police officer with a knife, threatening the safety of the officer and/or co-workers.

NOTE: An employee's decision not to use personal protective equipment may be made on a case-by-case basis but must have been prompted by legitimate and truly extenuating circumstances. This does not relieve the city of the responsibility of ensuring that personal protective equipment is reasonably accessible. Such non-use of personal protective equipment must be documented as to why it was not used and evaluated to reduce the likelihood of a similar incident in the future if possible. This documentation will be completed by the Department Director of the employee and attached to the individual exposure report.

104.4.12 Housekeeping Procedures

Employees who are potentially exposed to bloodborne pathogens must follow the following procedures:

a) All equipment, sinks, and working surfaces must be cleaned and decontaminated after contact with blood or other potentially infectious materials. Work surfaces must be cleaned immediately when surfaces are overtly contaminated, after any spill of blood or infectious materials, or at the end of the work shift if the surface may have been contaminated during that shift.

b) Protective coverings such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and surfaces must be replaced as soon as feasible when they become overtly contaminated or at the end of the work shift.

c) All trash containers, pails, bins, and other receptacles intended for routine use should be inspected, cleaned, and decontaminated as soon as possible if they have been overtly contaminated. All trash containers, pails, bins, and

other receptacles intended for reuse which have a reasonable likelihood of becoming contaminated with blood or other potentially infectious materials should be inspected and decontaminated on a regular basis.

d) Broken glassware and other sharp objects that may be contaminated should not be picked up directly with the hands. A brush and dustpan, tongs, or forceps will be used to clean up broken glassware or other sharps.

e) Contaminated reusable sharps are to be stored in containers that do not require hand processing.

f) Decontamination will be accomplished by utilizing a solution of 5.25 percent sodium hypo chlorite (household bleach) diluted 1-10 parts water or chemical germicides that are EPA approved for use as "hospital disinfectants" and are tuberculocidal when used at recommended dilution.

104.4.13 Regulated Waste Disposal

All contaminated sharps shall be discarded as soon as feasible in appropriately labeled, puncture resistant and leak proof containers. Sharps containers shall not be allowed to be overfilled. When moving containers of contaminated sharps from the area of use, the containers will be closed and sealed to prevent accidental release of contents or placed in a secondary container if leakage is possible. The secondary container must be closable, constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping and appropriately labeled.

Regulated waste other than sharps shall be placed in red bags or appropriately labeled and closed containers constructed to contain all contents, and to prevent leakage of fluids during handling, storage, transport, or shipping.

If outside contamination of the waste container occurs, the primary container will be placed in an appropriately labeled secondary container. The secondary container must be closable, constructed to contain all contents, and prevent leakage during handling, storage, transport, or shipping.

104.4.14 Laundry Procedures

Laundry contaminated with blood or other potentially infectious or hazardous materials will be handled as little as possible. Such laundry will be placed in appropriately marked bags at the location where it was used. Such laundry will not be sorted or rinsed in the area of use.

All employees who handle contaminated laundry will wear gloves and utilize personal protective equipment as necessary to prevent contact with blood or other potentially infectious or hazardous material.

If laundry is sent off-site, the laundry service is to be notified in accordance with section (d) of the OSHA Bloodborne Pathogens Standard (29CFR1910-1030).

104.4.15 Hepatitis B Vaccine

All employees that have been identified as having an occupational risk of exposure to blood or other potentially infectious materials (except for summer seasonal employees due to the temporary nature of their employment), volunteer fire fighters, and Reserve Officers will be offered the Hepatitis B vaccine at no cost to the individual. The vaccination consists of three (3) inoculations given intramuscularly over a six (6) month period. Vaccinations are performed under the supervision of a licenses health care provider or other health care professional.

Educational training and vaccinations will be offered within ten (10) working days of the employee's initial assignment to work involving the potential for occupational exposure to blood or other potentially infectious materials. All employees in positions with occupational risk are required to attend the training. Vaccinations are strictly voluntary.

Employees who decline the Hepatitis B vaccination will sign a waiver that uses the wording in Appendix A of the OSHA Standard (29CFR1910-1030). All employees accepting the vaccination shall complete an informed consent form.

Employees who initially decline the vaccine but who later wish to have it may then have the vaccine provided at no cost.

Human Resources has the responsibility of assuring that the vaccine is offered, the waivers are signed, and the necessary training is performed. All documentation should be forwarded to the Human Resources Department for placement and storage in the appropriate files. Clinic of Record will be responsible for administering the vaccine and maintaining all medical records related to the vaccinations.

104.4.16 Post-Exposure Evaluation and Follow-Up

Exposure incidents shall be reported to the employee's Department Director. The employee should complete an exposure report form and the exposure follow-up must be completed by the supervisor to ensure that all the necessary steps were correctly taken. Much of the information involved in this process must remain confidential and all possible measures are taken to protect the privacy of the people involved. Records of exposure incidents and records related to this policy shall be maintained as required.

Post-exposure vaccinations and confidential medical evaluations and follow-ups will be made available to all affected employees following the report of an exposure incident. These vaccinations and evaluations will be provided at no cost to the employee and shall be provided by and under the supervision of a licensed physician designated by the city. An accredited laboratory will conduct all necessary laboratory tests.

In order to ensure that the employee receives the best and most timely treatment if an exposure to bloodborne pathogens should occur, a comprehensive follow-up process is used. All these steps will be expedited in proper order to provide timely treatment, if necessary, of the exposed employee:

a) The exposed employee shall complete an exposure report providing documentation of the route of exposure and the circumstances related to the exposure incident.

b) The source individual should be identified unless such identification is not possible or is prohibited by state or local law. The source individual's blood will be tested as soon as feasible after consent, if obtained, in order to determine the person's HIV/HBV status. When the source individual's consent is not required by law, this individual's blood will be tested to determine HIV/HBV status. When the source individual is already known to be infected with Hepatitis B Virus or Human Immunodeficiency Virus testing for the person's HIV/HBV status need not be repeated.

c) Results of the source individual's testing will be made available to the exposed employee by the physician. The employee will, at that time, be informed of the applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

d) The employee will be offered the option of having their blood collected for testing of the employee's HIV/HBV serological status. The blood sample will be preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV/HBV serological status. However, if the employee decides prior to that time that testing will be conducted then the appropriate action can be taken and the blood sample discarded.

e) An appointment will be made for the exposed employee with a qualified health care professional to discuss the employee's health status, including reported illnesses and recommended treatments. Post exposure measures designed to prevent the spread of the disease or development of disease symptoms will be made available to the employee when medically indicated. The employee will be given appropriate counseling concerning precautions to take during the period after the exposure incident. The employee will also be given information on what potential illnesses to be alert for and to report any related experiences to appropriate personnel.

f) Exposure incidents will be reported to the employee's Department Director. Records of exposure incidents and records related to this policy shall be forwarded to Human Resources for proper storage.

104.4.17 Interaction with Health Care Professionals

After consultation, the health care professional shall provide the City with a written opinion evaluating the exposed employee's condition. A copy of this shall be furnished to the employee by the City. To maintain confidentiality, the written opinion will contain only the following information:

a) Whether the employee is able to return to work.

b) Whether Hepatitis B vaccination is indicated for the employee.

c) Whether the employee has received the Hepatitis B. vaccination.

d) Confirmation that the employee has been informed of the evaluation results.

e) Confirmation that the employee has been told about the medical conditions resulting from the exposure incident that requires re-evaluation or further treatment.

All other findings or diagnoses will remain confidential and will not be included in the written report. Copies of the written report will be kept in the employee's restricted medical file and not disbursed without the employee's permission except when required by law.

104.4.18 Education and Training

Well-informed employees are crucial to eliminating or minimizing the risk of occupational exposure to bloodborne pathogens. All employees who have the potential for exposure to bloodborne pathogens will be comprehensively trained. Training will be done annually, and in the case of new or transferring employees, at the time of their job assignment. The Education/Training Coordinator, currently the Human Resources Manager, is responsible for ensuring that all employees receive the correct training.

Training will be provided for all employees with occupational risk and to those whose duties require heightened awareness regarding bloodborne pathogens. Training programs will include, but are not limited to, an explanation of the following:

a) The OSHA Standard for Bloodborne Pathogens.

b) Epidemiology and symptoms of bloodborne diseases.

c) Modes of transmission of bloodborne pathogens.

d) The availability and provisions of the bloodborne pathogens occupational exposure control policy.

e) Appropriate methods for recognizing tasks and activities that might involve exposure to blood or other potentially infectious materials.

f) A review of the methods and limitations of methods that will prevent or reduce exposure.

g) How to select personal protective equipment

h) How to identify biohazard labels, signs, and color-coded containers.

i) Information on the Hepatitis B vaccine.

j) Actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

k) Procedures to follow if an exposure incident occurs, including incident reporting.

l) Information of the post-exposure evaluation and follow-up, including medical consultation that the City provides.

Training presentations will be conducted using the Bloodborne Pathogens Exposure Control Plan, the OSHA Standard, related videotapes, training aids, and other materials appropriate for the occupation. The Education/Training Coordinator, currently the Human Resources Manager, may or may not be assisted by a health care professional.

All employees will receive annual refresher training. Documentation of the training will be maintained for no less than three (3) years.

104.4.19 Record Keeping

All records required by the OSHA standards will be maintained by the City of Gardner, housed with Human Resources, for the duration of an employee's employment plus thirty (30) years.

10-105 CONFINED SPACE ENTRY

105.1 PURPOSE

The purpose of this policy is to establish minimum requirements and procedures for the safety and health of employees who work in, and in connection with, confined spaces.

105.2 DEFINITIONS

The following provide further clarification of terminology used in this policy:

Attendant: A person who is assigned as standby to monitor a confined space process or operation and provide support or react as required.

Biological Hazards: Infectious agents presenting a risk or potential risk to the well-being of man, or other animals, either directly through infection or indirectly through disruption of the environment.

Blinding/Blanking: Inserting a solid barrier across the open end of a pipe leading into or out of the confined space, and securing the barrier in such a way to prevent leakage of material into the confined space.

Confined Space: An enclosed area that has the following characteristics:

a) Its primary function is something other than human occupancy; i.e. manholes, sewers, lift or pump stations, storage tanks, etc.

b) Has restricted entry and exit.

c) May contain potential or known hazards; i.e. no ventilation, dangerous air contaminants, lack of oxygen, etc.

Double Block and Bleed: A method used to isolate a confined space from a line, duct or pipe by physically closing two in-line valves on a piping system, and opening a "vented-to-atmosphere" valve between them.

Engulfment: The surrounding, capturing, or both, of a person by divided particulate matter or liquid.

Entry: Ingress by persons into a confined space that occurs upon breaking the plane of the confined space portal with their face; all periods of time in which the confined space is occupied.

Hazard Evaluation: A process to assess the severity of known, or real, or potential hazards or all three, at or in the confined space.

Hazardous Atmosphere: An atmosphere that may be, or is, injurious to occupants by reason of: oxygen deficiency or enrichment; flammability or explosivity; or toxicity.

Hot Work: Work within a confined space that produces arcs, sparks, flames, heat, or other sources of ignition.

Isolation: A process physically interrupting or disconnecting, or both, pipes, lines and energy sources from the confined space.

LEL/LFL And UEL/UFL: Acronyms for "lower explosive limit"/"lower flammable limit" and "upper explosive limit"/"upper flammable limit".

Lockout-Tagout: The placement of a lock/tag on the energy-isolating device in accordance with an established procedure, indicating that the energy-isolating

device shall not be operated until removal of the lock/tag in accordance with an established procedure.

Non-Permit Confined Space (NPCS): A space that by configuration meets the definition of a confined space but which, after evaluation, is found to have little potential for generation of hazards or has the hazards eliminated by engineering controls.

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.

PEL: An acronym for "Permissible Exposure Limit" - which is the allowable air contaminant level established by the U.S. Department of Labor, Occupational Safety and Health Administration.

Permit Required Confined Space (PRCS): A confined space that, after evaluation, has actual or potential hazards that have been determined to require written authorization for entry.

Qualified Person: A person who, by reason of training, education and experience, is knowledgeable in the operation to be performed and is competent to judge the hazards involved.

Shall: Denotes a mandatory requirement.

Should: A recommendation that is a sound safety and health practice; it does not denote a mandatory requirement.

TLV: An acronym for "Threshold Limit Value".

Toxic Atmosphere: An atmosphere containing a concentration of a substance above the published or otherwise known safe levels.

105.3 HAZARD IDENTIFICATION

A survey shall be conducted of the premises or operations, or both, to identify confined spaces as defined by this policy. The survey shall be conducted by a qualified person and kept in the division location. The qualified person (supervisor or Department Director) shall develop an inventory of those locations or equipment, or both, which meet the definition of a confined space so that personnel may be made aware of them and appropriate procedures developed for each prior to entry.

Confined spaces can become unsafe as a result of: 1) possible atmospheric contamination by toxic or flammable vapors, or oxygen deficiency or excess; 2) possible physical hazards; 3) the possibility of liquids, gases, or solids being admitted during occupancy; or 4) the

isolation of occupants from rescue personnel. Hazards shall be identified for each confined space. The hazard identification process shall include, but not be limited to, a review of the following:

a) The past and current uses of the confined space that may adversely affect the atmosphere of the confined space. The hazard identification process should consider items such as Material Safety Data Sheets (MSDS) for materials currently or previously in the confined space; protective coatings which could trap materials or decompose or deteriorate during work in the confined space; decomposition of residues or reaction with cleaning agents or heat from welding, brazing, or cutting (flame or abrasive) operations; operation of engine powered equipment in the confined space.

b) The physical characteristics, configuration, and location of the confined space. The means of entry and exit and the hazards posed by adjacent spaces and operations should be reviewed.

c) Existing or potential hazards in the confined space, such as oxygen deficient or enriched atmosphere, flammable/explosive atmosphere, or toxic atmosphere. Reference sources should be consulted to determine the exposure limits for toxic materials.

d) Biological hazards associated with the confined space.

e) Mechanical hazards. Examples of mechanical hazards may be augers, ribbon blenders, etc.

105.4 HAZARD EVALUATION

Hazards identified shall be evaluated by a qualified person. Each hazard shall be examined with respect to:

a) Scope of hazard exposure. Consideration should be given to how many, or which employees, or both, are exposed or may be affected.

b) Magnitude of the hazard. Consideration should be given to how much energy may be released; how toxic are the chemicals; quantity of materials which could be inadvertently introduced, etc.

c) Likelihood of hazard occurrence. Consideration should be given to the range of probability for the hazard to occur, i.e. certain to impossible.

d) Consequences of the hazard occurrence. Consideration should be given to the most likely outcome if the hazard occurs, i.e. space explosion, death by asphyxiation, etc.

e) Potential for changing conditions/activities. Examples of changes in conditions/activities are the introduction of hot work or cleaning agents into the

confined space that were not identified in the original hazard identification and evaluation and not accounted for on the hazard evaluation. The filling of an adjacent tank is an example of changes in an adjacent space. Weather changes, such as thunderstorms, are examples of changes in environment that can cause problems in confined spaces. The hazard introduced by tools to be used in the confined spaces should also be considered.

f) Strategies for controlling the hazards.

g) Impact on the need for emergency response. The size of the man way may be such that special equipment is needed for rescue of the occupants.

Based on the evaluation of the hazards, a qualified person shall classify the confined space as either a permit-required confined space (PRCS) or non-permit confined space (NPCS).

A qualified person shall determine the need for periodic identification and re-evaluation of the hazards based on possible changes in activities in the space or other physical or environmental conditions, or both, which could adversely affect the space. When the need is determined, a qualified person shall conduct the identification and re-evaluation process.

105.5 PROCEDURES AND PRACTICES TO ENTER CONFINED SPACES

105.5.1 Non-Permit Confined Space (NPCS)

a) The supervisor or Department Director shall develop a written procedure that addresses specific measures and precautions that must be taken to safely enter NPCS. The procedure shall specify what conditions and precautions must be in place to allow for safe entry and what would constitute a change in conditions that would require a re-evaluation of the confined space.

b) All employees who will enter NPCS shall be trained in entry procedures, and what conditions would prohibit entry. Training shall be conducted as needed to maintain competence in entry procedures and precautions. NPCS shall be periodically re-evaluated to assure proper classification. Any change of conditions in the space which introduces new hazards to the space, shall require an immediate re-evaluation of the space before entry.

c) A qualified person shall conduct atmospheric testing as required. If atmospheric levels are not within acceptable limits after implementation of the engineering controls, the entry shall not proceed. If atmospheric test results are not within acceptable limits, this should indicate that the engineering controls are not adequate or the potential for generation of

hazards is not as minimal as was initially determined. Consequently, the confined space would no longer be an NPSC.

105.5.2 Permit Required Confined Spaces (PRCS)

a) A permit shall be established for all PRCS entries. The intent of the permit system is to provide a systematic review for hazards, communicate this information to the occupants and provide an approval sign-off for entries. This document shall include:

1) The date of entry, the location of entry, and type of work that will be conducted in the confined space.

2) The hazards to be controlled or eliminated prior to proceeding with the entry.

3) Safety equipment required to perform the entry and job duties in the confined space.

4) Safety precautions required to perform the job.

5) The type of atmospheric tests required and the results of those tests.

6) The type of equipment that will be necessary for a rescue and how aid will be summoned in the event of an emergency.

7) Duration for the permit.

8) Space for approval authority.

b) Before each entry into a confined space an entry permit as defined above will be completed by a qualified person and the contents communicated to the occupants or posted, or both. For a permit to remain in effect, the following must be done before each re-entry into the confined space:

1) Atmospheric test results shall be within acceptable limits. If atmospheric test results are not within acceptable limits, precautions to protect entrants against the hazards shall be addressed on the permit and in place.

2) A qualified person shall verify that all precautions and other measures called for on the permit are still in effect.

3) Only operations or work originally approved on the permit shall be conducted in the confined space.

c) When conditions or work activities are different than those specified on the permit and could introduce a new hazard to the confined space, the permit shall be immediately revoked. A new permit shall be issued or the original permit re-issued whenever changing work conditions or work activities introduce new hazards into the confined space.

105.6 ATMOSPHERIC TESTING

Before entry into a confined space, a qualified person shall conduct testing for hazardous atmospheres. This will generally consist of oxygen and combustible gas indicators. It is recommended on a vertical entry that remote probes be used to measure results at various levels of the confined space. If there is no potential for a flammable atmosphere, the flammability testing may be waived. Functional checks should be performed on the equipment before each entry using manufacturer's recommended methods. Periodically, equipment with internal calibration devices should be calibrated and maintained per manufacturer's instructions. Toxicity tests will normally be conducted using colorimetric sample tubes, organic vapor analyzers, photo ionization detectors, or other instant readout equipment. Although more accurate methods may exist, the practicality of testing must be considered. Testing sequence should be oxygen, flammability and toxicity. Testing equipment used in classified areas shall be listed or approved for use in such areas. This listing or approval shall be from nationally recognized testing laboratories such as Underwriters Laboratories or Factory Mutual Systems.

Initial testing of atmospheric conditions and subsequent tests after a job has been stopped for a significant period of time shall be done with the ventilation systems shut down. Further testing shall be conducted with ventilation systems turned on to ensure that the contaminants are removed and that the ventilation system is not itself causing a hazardous condition. Testing with the ventilation on can reveal problems such as the suction of engine exhaust gases into the confined space or where pneumatically powered blowers or tools may bring contaminated air or other gases into the confined space. If the confined space is vacated for any significant period of time, the atmosphere of the confined space shall be retested before re-entry is permitted.

Atmospheric testing may be waived for non-permit confined spaces only if such spaces are properly ventilated before and during occupancy and it has been established through a formal hazard identification and evaluation study that the ventilation is sufficient to guard against atmospheric contamination.

Testing of confined spaces shall be conducted throughout the entire portion of the space to be occupied. Confined spaces which are deep, have odd shapes, or remote areas may require that a probe or extension be added to the sampling equipment or occupants may be required to take sampling equipment into the confined space to test. The sampling should be done progressively so that personnel are aware of any deteriorating conditions as they move to remote areas of the confined spaces. Proper Personal Protective Equipment (PPE) should be worn which addresses the hazards that may be encountered during testing.

The atmosphere of the confined spaces shall be considered within acceptable limits whenever the following conditions are maintained;

a) Oxygen - 19.5% to 23.5%

b) Flammability - Less than 10% of the Lower Explosive Limit (LEL) or Lower Flammable Limit (LFL)

c) Toxicity - Less than recognized exposure limits.

To determine excessive toxic levels the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values document should be referenced; or Material Safety Data Sheets (MSDS); or 29CFR1910, Subpart Z; or other pertinent information which may apply to the toxic material. Consideration should be given to the use of continuous monitoring equipment. The time-weighted average (TWA) should not be exceeded in 8 hours and the short-term exposure limit (STEL) not exceeded in 15 minutes.

Whenever testing of the atmosphere indicates that levels of oxygen, flammability, or toxicity are not within acceptable limits, entry shall be prohibited until appropriate controls are implemented or appropriate personal protective equipment is provided. If the source of contaminant cannot be determined, precautions shall be adequate to deal with the worst possible condition that the contaminant could present in the confined space. If there is the possibility that the confined space atmosphere can become unacceptable while the work is in progress, procedures and equipment shall be provided to allow the employee to safely exit the confined space.

105.7 ATTENDANT

Attendant(s) shall be stationed outside any Permit Required Confined Space (PRCS). The number of attendants needed shall be determined by a qualified person. The number of attendants should be determined by considering the manpower it will take to carry out duties assigned to the attendant for the entry(ies). If several entry points are within a few feet of each other, one attendant may be able to monitor more than one entry. This would be dependent upon the attendant's ability to stay in contact with the entrants and summon aid in the event of an emergency.

Attendants and occupants shall remain in constant two-way communication. Communication methods should be selected according to hazards and potential for injury or harm to personnel entering the space. Signaling, visual contact and verbal radio communication are examples of available methods.

Attendants shall have the following duties:

a) Provide standby assistance to occupants entering the confined space. "Standby Assistance" may include checking breathing air cylinders, or any ancillary duties that do not require the attendant to enter the confined space or leave their position.

b) Direct occupants to exit the confined space when any irregularities are observed.

c) Initiate evacuation and emergency procedures.

d) Monitor for any conditions or changes that could adversely affect the entry.

e) Remain at the entry point unless relieved by another attendant.

105.8 ISOLATION AND LOCKOUT-TAGOUT

All energy sources that are potentially hazardous to confined space entrants shall be secured, relieved, disconnected and/or restrained before personnel are permitted to enter the confined space. The objective is the control of any situation where unexpected energization, start-up or release of stored energy would cause injury to workers. Energy sources may include: electrical, mechanical, hydraulic, pneumatic (air), chemical, thermal, radioactive and the effects of gravity.

Methods and means shall be selected and used to prevent flammable, toxic, irritating, or oxygen displacing gases and vapors from entering the space. All hazardous material, high pressure, high temperature, and other piping that could introduce a hazard shall be isolated by utilizing blinding, disconnection, removal, or double block and bleed as needed to prevent entry of material(s) and hazardous contaminant(s). Before the method(s) of isolation is selected, a qualified person should consider the hazards that may exist or develop to include temperature, pressure, flammability, reactivity, corrosiveness or toxicity of material in the piping and reactions that could occur with cleaning or purging agents, as well as any physical hazards. A confined space could be isolated to prevent entry of material(s) and hazardous contaminants using one or more of the following methods:

a) Inserting a blank sized for the proper pressure in piping nearest to the confined space.

b) Depressurizing and disconnecting contaminant supply line(s) and providing a blank or blind on piping leading into the confined space.

c) Misaligning pipe(s) at connections closest to the confined space and capping/blinding/plugging ends.

d) Utilizing two (2) blocking valves with an open vent or bleed valve between the blocking valves. If the bleed valve is not the same diameter as the line, then the bleed point should be monitored periodically during the work shift.

Pipelines or similar conveyances between confined space and point(s) of isolation shall be drained, cleaned or flushed of hazardous material and known hazardous contaminants as necessary. Pipelines between the confined space and the first valve, blank or associated equipment may contain material or hazardous contaminants. A qualified person should ensure that such piping has been flushed, cleaned or purged. If this is not possible, i.e. a clogged line, special precautions and procedures necessary to protect occupants and control the hazards should be in place.

Precautions shall be taken to ensure that whenever drains, vents or piping are left open that reversal of flows, or air contamination from adjacent processing, or chemical handling, cannot enter the confined space. A qualified person should assess the impact of other equipment in isolating a confined space. Inter-connected equipment, vessels or machinery may affect the isolation method(s) chosen.

In confined spaces where complete isolation is not possible, provisions shall be made for as rigorous an isolation as practical and an evaluation conducted. A decision to enter these or other similar spaces should be based upon assessing the potential for hazardous contaminants being present and either devising a plan for protecting personnel entering the space or suspending entry until adequate hazard control and protection of occupants can be assured. Use of methods such as ventilation or PPE should be considered. Special precautions shall be taken when entering double walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall. Distillation vessels, boilers and similar type equipment may contain cracks or leaks that may produce a hazardous environment inside the confined space.

Equipment or processes shall be locked or tagged or both in accordance with the City of Gardner's Hazardous Energy Control Program. Where there is a need to test, position or activate equipment by temporarily removing the lock or tag or both, a procedure shall be developed and implemented to control hazards to the occupants. Equipment start-up may pose entanglement, entrapment or engulfment hazards to occupants inside the space. A qualified person should assess the hazard of temporarily removing the locks/tags. Any removal of locks, tags, or other protection measures shall be done in accordance with the City of Gardner's Hazardous Energy Control Program. Lockout, or tagout, or both, of equipment, systems and processes shall be confirmed prior to permitting entry into the confined space. Confirming adequate lockout, or tagout, or both, of potentially hazardous stored or residual energy should be included as part of confined space entry permit review.

105.9 VENTILATION

When ventilation is used to remove atmospheric contaminants from the confined space, the space shall be ventilated until the atmosphere is within the acceptable ranges. Consideration should be given to the volume of the space to be ventilated, the output capacity of the ventilating device, and the distribution of air within the confined space. In addition the air movers should meet the specifications as outlined in ANSI/NFPA 91-1983 and ANSI Z9.2-1979. Ventilation normally consists of a pre-entry purge of several air changes, then continuous introduction of fresh air during occupancy. Natural ventilation may be acceptable if it can achieve the same results as the mechanical ventilation. Consideration should be given to bonding or using intrinsically safe air movers when moving flammable atmospheres.

Ventilation shall be maintained during the occupancy if there is a potential for the atmospheric conditions of the confined space moving out of the acceptable range.

When ventilation is not possible or feasible, alternate protective measures or methods to remove air contaminants and protect occupants shall be determined by the qualified person prior to authorizing entry.

105.10 CLEANING/DECONTAMINATION

Confined Spaces shall be cleaned/decontaminated of hazardous materials to the extent feasible before entry. In some instances the purpose of the entry is to clean the confined space. In these cases, the confined space should be cleaned/decontaminated as much as possible before personnel enter. Proper PPE and other precautions should be used to address any hazards that will remain after the pre-entry cleaning.

Cleaning/decontamination shall be the preferred method of reducing exposure to hazardous materials. Where this is not practical, personal protective equipment shall be worn by the entry personnel to provide appropriate protection against the hazards that may be present. Prior to commencing cleaning/decontamination operations, care should be exercised in the selection of cleaning compounds to ensure their compatibility with the environment in which they will be used.

105.11 PERSONAL PROTECTIVE EQUIPMENT (PPE)

A qualified person shall determine personal protective equipment needed by all personnel entering the confined space including rescue teams. Employees shall wear personal protective equipment selected in accordance with the requirements of the job to be performed and meeting the specifications of applicable standards.

105.12 HEAD PROTECTION

Consideration should be given to: 1) falling objects, both from within the confined space and also through the entryway, and 2) structures and equipment that present hazards to the head.

105.13 EYE AND FACE PROTECTION

Consideration should be given to irritant dusts, vapors, mists, abrasive particles and flying objects. Safety glasses, impact goggles, chemical goggles, or face shields appropriate to the conditions in the confined space and the work to be performed should be provided as needed.

105.14 HAND PROTECTION

Consideration should be given to mechanical protection (sharp edges, abrasions, punctures), chemical protection (acid, solvents), physical protection (heat, cold), electrical protection and handling of slippery tools and materials.

105.15 FOOT PROTECTION

Consideration should be given to physical hazards (falling objects, rolling equipment), chemical hazards (acids, solvents), slip resistance, electrical conductivity, and generation of sparks.

105.16 PROTECTIVE CLOTHING

Consideration should be given to temperature, moisture, chemical resistance, vapor permeability, flame retardancy, static resistance and likelihood of contamination of clothing with toxic materials.

105.17 RESPIRATORY PROTECTION

Respirators should be selected and used in conjunction with an organized respirator protection program.

105.18 HEARING PROTECTION

If using hearing protection, consideration should be given to how it will affect communications between the personnel in the space and the attendant.

105.19 SAFEGUARDS

Each entry and exit point shall be evaluated to determine the most effective methods and equipment to be utilized to enable employees to safely enter and exit the confined space. Safe entry and exit means shall be provided for confined spaces. In most instances, this may involve the use of ladders. However, if use of a ladder is impractical, another safe means of lowering and raising employees should be selected, i.e. bosun chairs, winch devices, etc.

Appropriate retrieval equipment or methods shall be used whenever a person enters a PRCS. Exception: If the retrieval equipment increases the overall risks of entry or does not contribute to the rescue, its use may be waived. The type of retrieval equipment required is dependent on the specific circumstances. Consideration should be given to the size and location of the opening to the space, obstacles within the space, number of occupants, type of retrieval equipment, and whether or not the rescue would be vertical or horizontal. A mechanical device shall be available to retrieve personnel from vertical type PRCS's greater than five feet in depth. In general, mechanical lifting devices should have a mechanical advantage adequate to safely rescue personnel.

Where the potential exists for persons or objects falling into a confined space, warning systems, or barricades shall be employed at the entrance. While protection is desired to prevent attendants or others from falling into a confined space, such protection should not affect ventilation of or egress from the confined space. Fall-arrest systems shall be worn by personnel entering confined spaces as determined by a qualified person.

Electrical equipment used in hazardous locations shall meet the appropriate requirements of Article 500 of the National Electrical Code (NFPA-70). Tools, lighting, communications and test equipment which will be used in classified areas should be listed or approved for

the class by accredited organizations such as Underwriters Laboratories, Factory Mutual System, Canadian Standards Association, British Approvals Service for Electrical Equipment in Flammable Atmospheres, etc. Where there is a potential for electrical shock, appropriate electrical equipment or systems shall be used. This would include protection such as ground fault circuit interrupters (GFCI), assured grounding systems, double insulated tools, separately derived systems, and low voltage systems.

105.20 WARNING SIGNS AND SYMBOLS

Any confined space that could be entered inadvertently shall have a sign identifying it as a confined space. Obvious confined spaces such as vessels, tanks, and manholes, need not be identified. However, less obvious confined spaces such as certain dikes, excavations, and pits should be identified. Signs shall be maintained in a legible condition. For PRCS's, the sign shall contain a warning that a permit is required before entry.

105.21 EMERGENCY RESPONSE

A plan of action shall be written with provisions to conduct a timely rescue for individuals in a confined space should an emergency arise. These rescue provisions will normally be present in the form of emergency response procedures. Included in these provisions shall be:

105.22 DETERMINATION OF WHAT METHODS OF RESCUE MUST BE IMPLEMENTED TO RETRIEVE INDIVIDUALS

A review should be conducted of all the different types of confined spaces that will be entered and what steps/equipment it will take to get someone out. Consideration should be given to the size and configuration of the confined space and the body size of entering personnel.

105.23 DESIGNATION OF RESCUE PERSONNEL THAT ARE IMMEDIATELY AVAILABLE WHERE PRCS ENTRIES ARE CONDUCTED

Off-site emergency response personnel may be used provided they are capable of performing a rescue, are familiar with the premises, and can respond in a timely manner. Emergency treatment should generally begin within four minutes for the person with cardiopulmonary arrest. If outside emergency organizations are to be used as rescuers, these organizations should be involved in rescue procedure development and drills.

105.24 TYPE AND AVAILABILITY OF EQUIPMENT NEEDED TO RESCUE INDIVIDUALS

Harnesses, lifelines, and mechanical lifting devices (for vertical entries) are normally required. Breathing equipment and medical aid equipment may also be necessary. Consideration should also be given to what type of lighting would be used in the confined space, communication devices, and any other special equipment that might be used for rescue.

105.25 AN EFFECTIVE MEANS TO SUMMON RESCUERS IN A TIMELY MANNER

Audible alarms, two-way radios, telephones, etc., are some of the possible means of summoning aid and rescue personnel. Consideration will be given to providing occupants a method of informing the attendant that there is an emergency.

Training and drill of the attendant and rescue personnel in preplanning, rescue and emergency procedures.

All rescue personnel must use self-contained breathing apparatus (SCBA) or Combination Type C Airline/SCBA breathing equipment, when entering the confined space to rescue victims. In some instances the entrance to the confined space may be such that an SCBA unit on the rescuer will not fit through the opening of the confined space. This should have been pre-determined in hazard identification and evaluation or drills. In this event, the rescuer may be required to use Combination Type C Airline/SCBA type breathing equipment. If it is established that the cause of the emergency is not a hazardous atmosphere, rescue-breathing equipment is not required.

All rescue equipment shall be inspected periodically by a qualified person and prior to start of work to ensure that it is operable. Rescue equipment that is taken out of service should be replaced with similar equipment.

105.26 TRAINING

105.26.1 General Requirements

Personnel responsible for supervising, planning, entering or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry. Training, whether basic or advanced, formal or informal, should be commensurate with the complexity of the confined space entry requirements. Training shall include:

a) An explanation of the general hazards associated with confined spaces;

b) A discussion of specific confined space hazards associated with the facility, location or operation;

c) The reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces;

d) An explanation of the permit system and other procedural requirements for conducting a confined space entry;

e) How to respond to emergencies;

f) Duties and responsibilities as a member of the confined space entry team;

g) A description of how to recognize probable air contaminant overexposure symptoms to themselves and co-workers, and method(s) for alerting attendants.

105.26.2 Training For Atmospheric Monitoring Personnel:

Training shall include training in the proper use of atmospheric monitoring instruments. This shall include field calibration, basic knowledge of the work being performed, the anticipated hazardous contaminants, and any process that could significantly alter original conditions inside or outside the confined space. It is important for individuals conducting atmospheric tests to possess adequate knowledge of the proper operation of monitoring equipment as well as its limitations associated with anticipated conditions (such as inaccurate measurement readings for flammable gas when the oxygen level is below 16% for certain equipment). Similarly, these individuals should have information about the related process to anticipate potential atmospheric contaminants such as a nearby reactor containing a highly toxic substance that could endanger the entry team in the event of a leak or release.

105.26.3 Training For Attendants

Training shall include the following:

a) Summoning rescue or other emergency services;

b) The proper use of equipment used for communicating with entry and emergency/rescue personnel.

105.26.4 Training For Emergency Response Personnel

Training shall include:

a) The Rescue Plan And Procedures Developed For Each Type Of Confined Space They Are Anticipated To Encounter

Emergency response personnel should simulate actual rescue conditions by conducting practice drills. Rescuers should be timed to determine if adequate time was allotted for successful cardiopulmonary resuscitation (CPR) and first-aid techniques. Typical potential rescue problems that should be addressed are egress restriction, ability to lift without injury, problems in using rescue equipment, and fall hazards.

b) Use Of Emergency Rescue Equipment

Individuals involved in rescues should receive training in the use of rescue equipment including medical equipment they would be expected to use or operate during an emergency rescue.

c) First Aid And Cardiopulmonary Resuscitation (CPR) Techniques

Persons performing CPR or first aid or both, should possess current certification.

d) Work Location And Confined Space Configuration To Minimize Response Time

Rescuers should be able to effectively locate the emergency site without undue delay.

105.26.5 Verification Of Training

a) A qualified person shall conduct periodic assessment of the effectiveness of employee training. Training effectiveness may be evaluated by several techniques. Written, as well as practical testing is recommended. Personnel should be questioned or asked to demonstrate their practical knowledge of confined space hazards that are in their work areas, to identify locations of confined spaces, their role in exercising proper permit procedures, use and donning of personal protective equipment, such as respirators, and their role in response to emergency situations.

b) Training sessions shall be repeated as often as necessary to maintain an acceptable level of personnel competence. Personnel who are routinely entering the same confined spaces on a daily basis will require less refresher training than employees who only occasionally enter a confined space. Periodic training verification will determine the frequency of refresher training.

c) Documentation should be maintained in a central location and periodically reviewed to ensure proper follow-up for refresher training.

105.27 MEDICAL SUITABILITY

The physical and psychological suitability of persons to do confined space work shall be considered prior to working in confined spaces. Since confined space entry work may require the use of respiratory protection, possible exposure to various physical stresses such as thermal, humidity, noise, vibration, etc., and psychological stresses such as claustrophobia, and vertigo; these concerns need to be addressed by a physician or other licensed medical practitioner. Physical qualifications for respirator use are contained in ANSI Z88.6. The physical and psychological capabilities of potential candidates for confine space work can be evaluated during training exercises for the confined space work.

105.28 CONTRACTORS

Employers who use contractors to enter confined spaces shall inform contractors of known potential hazards associated with the confined space to be entered. The employer

and contractor shall establish who will serve as the rescue responder in an emergency and what system will be used to notify the responder that an emergency exists. Pre-planning should be conducted between the contractor and the employer to establish who will be responsible to perform rescue and provide medical services in the event of an emergency situation. If the contractor expects to use the employer's rescue capability, this should be agreed upon before the entry and the method of contacting the rescue responder established.

10-106 HAZARD COMMUNICATION PROGRAM

106.1 PURPOSE

The purpose of the Hazard Communication Program is to ensure that the City of Gardner complies with the federal OSHA Hazard Communication Standard by compiling a hazardous chemicals list, by using Material Safety Data Sheets (MSDSs), by ensuring that containers are labeled, and by providing employees with training. The Standard is designed to ensure that all employees who have potential occupational exposure to hazardous chemicals and substances are informed, trained, and made aware of precautionary measures. The Hazard Communication Coordinator is currently the Human Resources Manager.

106.2 SCOPE

This program applies to all work operations in the City of Gardner where an employee may be exposed to hazardous chemicals or substances under normal working conditions or during an emergency situation.

106.3 DEFINITIONS

A hazardous chemical is any chemical that is a physical hazard or a health hazard. A physical hazard is defined as a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

A health hazard means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, and neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes, or mucous membranes. (See standard for further definitions.)

106.4 HAZARDOUS CHEMICAL LIST

Each department shall develop a list of all chemicals known to be present in the work place using an appropriate identification and/or classification that permits reference to the appropriate Material Safety Data Sheets. From this list, the department will develop for each facility the list of all hazardous chemicals known to be present in the work place.

The list of hazardous chemicals shall include the manufacturer's product name, location, and telephone number and the work area where the product is used. Lists shall be updated as new chemicals are put into or taken out of service.

Annual inventories shall be performed to ensure that all chemicals are listed.

The lists of hazardous chemicals shall be made available to affected employees. Copies of the lists shall be forwarded to the Hazard Communication Program Coordinator for inclusion in the master Material Safety Data Sheet (MSDS) binder which is housed in Human Resources.

106.5 MATERIAL SAFETY DATA SHEETS

Each City of Gardner department is responsible for implementing and maintaining a chemical screening procedure and for obtaining the Material Safety Data Sheets (MSDSs) for any new chemicals before they are first received at the work place. Each department shall have an MSDS for each hazardous chemical that they use.

An MSDS is needed for all chemicals (except those specifically exempted by the standard), not just hazardous chemicals. If a manufacturer declines to supply an MSDS on the grounds that the chemical is not hazardous, the department has an obligation to determine, to the best of its ability, whether the supplier's statement is correct.

All chemicals include not only the raw materials used but also operating chemicals (e.g. water treatment, janitorial supplies). The only exception is those chemicals that might be bought in consumer packaging, such as a can of drain cleaner off the grocery shelf. Note, however, that if such a consumer product is purchased in industrial packaging (drain cleaner in a 30-gallon drum), the product is no longer exempt, and an MSDS is required for it.

The manufacturer is responsible for supplying an MSDS prior to its first shipment of a hazardous chemical. A review must be conducted before employees are exposed to the chemical. Each MSDS must contain specified information about a hazardous chemical. If some required information is unavailable, the MSDS must so indicate, as blanks are not allowed.

An MSDS shall be required with all samples a vendor may send or deliver to a location, if it was not received before the sample arrives.

A chemical should not be purchased until an acceptable MSDS is on file and has appropriate approval.

The chemical identity and name of a hazardous chemical may be withheld from the Material Safety Data Sheet if it is a trade secret. Information concerning the properties and effects of the hazardous chemical must be disclosed in the MSDS. The specific chemical identity must be made available to health professionals in certain situations.

It is important that all MSDSs be kept current, both those retained by each department and the master binder kept by the Hazard Communication Program Coordinator, currently the Human Resources Manager. If an MSDS is for a chemical that is no longer on hand or that has been taken out of service, the MSDS shall me marked "Taken Out of Service" and the date the chemical was taken out of service placed on it. The marked and dated MSDS shall be forwarded to the Hazard Communication Program Coordinator, currently the Human Resources Manager, for retention as required by law. When an MSDS is obtained for a new chemical, it shall be marked "Taken Into Service" with the department and the date the chemical was taken into service. A copy of the marked and dated MSDS shall be forwarded to the Hazard Communication Program Coordinator, currently the Human Resources Manager, for inclusion in the master MSDS binder.

Copies of hazardous chemicals' MSDSs must be readily accessible to employees exposed to those chemicals. (MSDSs cannot be kept in a locked office.) It is each department's responsibility to establish a system that ensures employees' access to MSDSs. A copy of the MSDS for any chemical product(s) used in the field should be readily available in the vehicle.

106.6 HAZARD DETERMINATION

As appropriate for each material imported or used, a review of the Material Safety Data Sheets (MSDSs) will be completed to determine the known hazards (if any) of that material. The department or division proposing to bring in a new chemical is responsible for ensuring that the chemical screening procedure is followed. This includes the user facility sending copies of the MSDS to the Hazard Communication Program Coordinator, currently the Human Resources Manager. It also includes:

Resolving any inconsistencies in the MSDSs provided by different suppliers for the same chemical. The department must also provide consistent MSDS information for reference by employees.

Determining if the City of Gardner's policies dictate different handling procedures than indicated on MSDS and, when appropriate, providing a recommended handling procedure to the department.

Establishing a central repository of all departmental MSDSs.

Emphasizing that a chemical is handled the same way regardless of the supplier or location. Any questions regarding the handling of a chemical should be directed to the manufacturer.

106.7 HAZARD COMMUNICATION PROGRAM COORDINATOR

The Human Resources Manager is the designated Hazard Communication Program Coordinator. Typical duties of the Hazard Communication Program Coordinator include, but are not limited to:

a) Review and revise the City of Gardner's Hazard Communication Program to ensure compliance with legal requirements or as required by law.

b) Maintain a master Material Safety Data Sheet (MSDS) binder that includes a listing of all the chemicals and MSDSs identified as a result of the inventories conducted by each department on an annual basis.

106.8 LABELS AND OTHER FORMS OF WARNING

Labeling and warning signs are important for the prevention of exposure in the workplace and work area. Chemical manufacturers, importers and distributors must ensure that each container of hazardous chemicals leaving its workplace is properly labeled. Containers of hazardous materials, upon being brought into any City facility should already have the manufacturer's label. However, there are times when labels are defaced or substances are transferred from original to storage containers. Each department must ensure that each container of hazardous chemicals in its workplace is properly labeled, tagged, or marked to identify the name(s) of the hazardous chemicals contained therein (the same name as appears on the MSDS), appropriate hazard warnings, and the name and address of the manufacturer, importer, or other responsible party to contact for more information if necessary.

Labels are required on both the original and any storage containers. Any container that contains hazardous chemicals must be labeled if the employee who performed the transfer does not intend the chemical for immediate use (same shift).

Organizations such as the Department of Transportation (DOT), National Fire Protection Association (NFPA), National Paints and Coating Association (NPCA), and various chemical manufacturers have all developed independent labeling systems to help promote rapid identification of hazardous material categories. Training in this area will be provided to assist employees in label interpretation.

106.9 EMPLOYEE INFORMATION AND TRAINING

Employees shall be provided with applicable information and training on the hazards of chemicals in the work area to which they may be exposed and the means to avoid those hazards prior to their initial assignment to that work area.

Employees shall be informed of the requirements for training and information contained in the OSHA Hazard Communication Standard, any and all operations in their individual work area where hazardous chemicals are present, and the location of the required lists of hazardous chemicals and Material Safety Data Sheets required by the standard. All employees have access to the written program through department copy of the Personnel Policies.

Each employee's training shall include at least the following:

a) All methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area. Such methods may include monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released or other appropriate warning systems or indicators.

b) Any physical or health hazards connected with the chemicals used in the work area.

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

d) The details of the hazard communication program developed by the City of Gardner including an explanation of the labeling system and the Material Safety Data Sheets and how employees can obtain and use the appropriate hazard information.

Each department shall provide basic training to employees on an annual basis and refresher training whenever new chemicals are introduced into the workplace, new information on a chemical is obtained, or employees transfer to a new work place. Records must be kept of employees' attendance and the materials covered.

106.10 CONTRACTED EMPLOYEES

The City of Gardner has a responsibility to its contracted employees. Each department shall be responsible for informing all contracted employees about any hazardous materials that the contracted employees may be exposed to in the work area.

Contractors have a responsibility to the City of Gardner. Contractors who are contracted to complete a project within a City of Gardner facility that involves the use of chemical materials must, as part of the contract:

a) Provide the City of Gardner with Material Safety Data Sheets that comply with the Hazard Communication Standard. This includes all chemical materials used by the contracted employees that are subject to the standard. Each Division will have copies of the appropriate MSDS forms available and the master binder will be housed in Human Resources.

b) Properly label all containers (bags, drums, etc.) according to the Hazard Communication standard.

It shall be the responsibility of the City of Gardner to communicate these requirements to the contracted employer as part of the contract and to ensure that the contractor has complied with these items prior to the first shipment of material and/or the beginning of the actual work.

10-107 HAZARDOUS ENERGY CONTROL PROGRAM

107.1 SCOPE

The standard for the control of hazardous energy sources (Lockout-Tagout) covers servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment or release of stored energy could cause injury to employees. The rule generally requires that energy sources for equipment

be turned off or disconnected and that the switch either be locked or labeled with a warning tag.

107.2 GENERAL REQUIREMENTS

Under the ruling employers must:

a) Develop an energy control program

b) Use locks when equipment can be locked out.

c) Ensure that new equipment or overhauled equipment can accommodate locks.

d) Employ additional means to ensure safety when tags rather than locks are used by using an effective tagout program.

e) Identify and implement specific procedures (generally in writing) for the control of hazardous energy including preparation for shutdown, shutdown, equipment isolation, Lockout-Tagout application, release of stored energy, and verification of isolation.

f) Institute procedures for release of Lockout-Tagout including machine inspection, notification and safe positioning of employees, and removal of the Lockout-Tagout device.

g) Obtain standardized locks and tags which indicate the identity of the employee using them and which are of sufficient quality and durability to ensure their effectiveness.

h) Require that each Lockout-Tagout device be removed by the employee who applied the device.

i) Conduct inspections of energy control procedures at least annually.

j) Train employees in the specific energy control procedures with training reminders as part of the annual inspections of the control procedures.

k) Adopt procedures to ensure safety when equipment must be tested during servicing, when outside contractors are working at the site, when a multiple lockout is needed for a crew servicing equipment, and when shifts or personnel change.

107.3 EXCLUSIONS

Excluded from coverage are:

a) Normal production operations including repetitive, routine minor adjustments, and maintenance that would be covered under OSHA's machine guarding standards.

b) Work on cord and plug connected electric equipment when it is unplugged, and the employee working on the equipment has complete control over the plug

c) Hot tap operations involving gas, steam, water, or petroleum products when the employer shows that continuity of service is essential, shutdown is impractical, and documented procedures are followed to provide proven effective protection for employees.

107.4 EFFECTIVE DATE

The final rule (29 CFR 1901.147) was published in the Federal Register September 1, 1989 with implementation effective October 31, 1989.

10-108 LOCKOUT-TAGOUT PROCEDURE

108.1 PURPOSE

This procedure establishes the minimum requirements for the lockout and tagout of all energy isolating devices. It shall be used to ensure that all circuits, machines or equipment are isolated from all potentially hazardous energy and locked out and tagged out before employees perform any repair, servicing or maintenance activities where the unexpected energization, start-up or release of stored energy could cause injury

All machines and equipment shall be locked and tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolation device where it is locked and tagged out.

108.2 RESPONSIBILITY

The Department Director in each department will notify their employees that a lockout and tagout system is going to be utilized. The Department Director will also instruct the employee on the type and magnitude of energy that each machine or piece of equipment utilizes.

108.3 DEFINITIONS

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

Tagout Device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolation 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 devices shall be standardized in color, shape, size, print and format throughout the departments.

108.4 PREPARATION FOR LOCKOUT AND TAGOUT PROCEDURES

The Department Director shall identify all machines and equipment, in their department, to be certain which switch(es), valve(s) or other energy isolating devices apply to the machines or equipment to be locked and tagged out and post warning signs where appropriate, identifying these machines and equipment. More than one energy source (electrical, mechanical, or others) may be involved.

108.5 SEQUENCE OF LOCKOUT AND TAGOUT SYSTEM PROCEDURES

a) If the machine or equipment is operating, shut it down by normal stopping procedures (depress stop button, open-toggle switch, etc.).

b) Operate the switch, valve, or other energy isolating device(s) so that the machine or equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotation fly wheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such a repositioning, blocking, bleeding down, etc.

c) Lockout and tagout the energy isolating device(s) with assigned device(s) and tag(s).

d) After ensuring that no personnel are exposed, and as a check on having disconnected the energy source(s), operate the push button or other normal operating controls to make certain the machine or equipment will not operate. *Caution: Return operating controls(s) to "neutral" or "off" position after the test.*

e) The machine or equipment is now locked and tagged out and ready for repair, servicing and/or maintenance.

f) Do not attempt to operate any switch, valve, or other energy-isolating device where it is locked and tagged out.

108.6 RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS

After the repair, servicing and/or maintenance is complete and the machine or equipment is ready for normal production operations, check the area around the machine or equipment to ensure that no one is exposed.

After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

10-109 CLEARANCES OF LINES & EQUIPMENT (HOLD PROCEDURES)

109.1 GENERAL

All circuits and equipment, including electrical and mechanical apparatus, are classified as either "dead" or "alive".

All circuits and equipment must be considered "alive" at all times unless fully protected in accordance with the Hold Procedure.

It is the responsibility of every affected person of all operating divisions of the City of Gardner to familiarize themselves with and understand the Hold Procedure, and to fully comply with the various provisions outlined herein.

A Hold can only be granted to a qualified person authorized by the City of Gardner.

109.2 DEFINITIONS

Control Authority: The person responsible for approving "Requests for Holds" and for switching and tagging operations required in connection with Holds and for granting Holds on circuits and equipment.

Authorized Person: A qualified person who has authority to secure a Hold on a specific circuit or equipment that is to be worked "dead". The Authorized Person shall obtain a Hold on that particular circuit or equipment, be responsible for making certain that sufficient and adequate protections have been provided, and convey to other workers associated with them the limits of the protection and the safe working area.

Red Hold (No Test Voltage): A condition wherein a specific circuit or equipment is isolated from all normal sources of energy and all points necessary for such isolation are tagged with Red Tags. Under no condition will a voltage (test or otherwise) be applied to a circuit and/or equipment that is within the limits of a red hold. It is granted by a Control Authority to an Authorized Person. Once granted, it continues to exist until the Authorized Person properly surrenders the Hold to the Control Authority. Any number of Authorized Persons may be granted red holds on the same circuit or equipment. A red hold cannot be granted for any section of a circuit or equipment covered by a blue hold.

Blue Hold: A condition wherein a specific circuit or equipment is initially isolated from all normal sources of energy and all points necessary for such isolation are tagged with Blue Tags. It is granted when it is known that isolating points must be operated or tests applied before the work is completed. It permits operation of isolating points by or under the direct order of the Authorized Person designated on the blue hold only when permission is granted by the Control Authority. A blue hold cannot be granted for any section of a circuit or equipment covered by a red hold or another blue hold.

NOTE: Whenever it is necessary to work under a *blue hold* in one section having a common limit point with an adjacent section that is to be worked under a *red hold*, the common limit point *shall* bear both a Blue and Red Tag. The Red Tag *will*, in this instance, take precedence over the Blue Tag and the point *cannot* be operated.

Workers Hold: A Hold (red or blue) established by an Authorized Person. It can be used only for a specific circuit or equipment, and then only for such cases as:

1. Emergency work on circuits or equipment.

2. Where local Control Authority *is not* available and work on such equipment *will not* affect system operations and where complete protection is secured locally.

3. Circuits or equipment at locations without communications facilities.

NOTE: After work is completed under the Workers Hold, it *shall* be surrendered in accordance with the procedures for SURRENDERING A HOLD hereof before being energized. Complete records (including completed tags) of all operations performed in connection with the Workers Hold *shall* be sent to the recognized Control Authority as soon as possible after completion of the work.

109.3 CONDITIONS UNDER WHICH A HOLD IS REQUIRED

A Hold must be obtained whenever "dead" work is to be performed on a completed circuit or equipment or on those portions of circuits and equipment under construction that can be made "alive" through normal sources by the operation of an isolating point.

Circuits and equipment under construction or those portions thereof, which cannot be made "alive" through normal sources do not require a Hold, however, if such circuit or equipment can become "alive" accidentally by fallen wires, induced voltages, etc., protection shall be provided as set forth in the AUTHORIZED PERSON'S RESPONSIBILITY UNDER A HOLD and WORKER'S RESPONSIBILITY UNDER A HOLD sections hereof, before "dead" work is started.

109.4 OBTAINING A HOLD

A "Request for Hold" may be made by or for any Authorized Person and shall be submitted to the Control Authority as far in advance as practical of the time when the Hold will be needed. Such written requests shall specify the following:

a) The name of the Authorized Person

b) The circuit or equipment, and limits of the Hold (the isolating points) between which work is to be done.

c) The nature and location of the work to be done, the type of Hold required and other pertinent information.

d) The time the Hold is wanted and its approximate duration.

e) When rearrangements are planned, a sketch of the changes *shall* also be furnished at the tie of the request. This sketch shall be dated, signed, and marked "proposed".

f) Signature of person making the request.

The Control Authority shall make preparations for the Hold as follows:

a) Carefully check to make sure that no condition exists which will prevent the granting of the proposed Hold. If such a condition exists, notify the person who originated the request and/or the Authorized Person as soon as practical.

b) The Control Authority shall have the section of the circuit or equipment isolated from all normal sources.

c) The Control Authority shall have all isolating points properly tagged.

d) Where instruments are available, the Control Authority shall have the instruments read as a check on the isolation of the circuit or equipment against electrical energy, mechanical notion, flow of fluids, gases, rotation, etc.

After the specified circuit or equipment has been removed from service and its isolating points have all been tagged, the Control Authority will grant the Hold to the Authorized Person. This grant shall specify the hold number, equipment, circuit, or section isolated, and identify the isolating points on which tags have been placed.

NOTE: In all cases where there is doubt as to the Authorized Person's qualifications or of their proper knowledge of the rules or equipment, the Control Authority *shall* communicate the facts to the Authorized Person's supervisor who *will* then take full responsibility for whatever procedure is followed.

The Control Authority may request an interconnected company or a customer to place isolating points in the proper position to insure the required isolation and to apply an approved tag or sign.

109.5 AUTHORIZED PERSON'S RESPONSIBILITY UNDER A HOLD

After an Authorized Person has been granted a Hold, they will perform or witness the testing, grounding, immobilizing, etc., as follows:

a) Check the isolating points tagged for his/her protection whenever practical.

b) Test, and if found "de-energized", apply protection, such as grounding, or immobilizing device, etc., on the "de-energized" side of all possible sources to the working zone.

c) When work is to be performed on "dead" equipment that is adjacent to "alive" equipment, the location in which it is safe to work shall be protected. Proper instructions shall be given to all workers as to the extent of the protection and hazards present.

d) At the beginning of each job, and also at the beginning of each day or shift thereafter, when the job continues for more than one day, the Authorized Person shall explain and point out to everyone working under them the exact conditions that exist.

e) The Authorized Person shall keep the Control Authority advised of any increase or decrease in the estimated time required to complete the work.

109.6 WORKER'S RESPONSIBILITY UNDER A HOLD

A worker *shall not* start work on circuits or equipment under a Hold until they have been advised of and thoroughly understands the scope of the work and the protection limits.

109.7 TRANSFERRING A HOLD

The Authorized Person in charge who received the Hold may transfer this hold as follows:

a) The Authorized Person *shall* notify the successor of the limits of the Hold and the location of the protection that has been installed before informing the Control Authority of the proposed transfer.

b) The Authorized Person *shall* personally inform the Control Authority of the proposed transfer, and if this is permitted, the workers under their direction *shall* be notified and the name of the successor *shall* be entered at that time on the record by the Control Authority. Thereafter, the successor shall be the Authorized Person.

109.8 SURRENDERING A HOLD

Upon completion of the work, the Authorized Person *shall* advise everyone working under their Hold that they *shall* thereafter consider the circuit or equipment "alive". They *shall* have all protection removed which was applied under the Hold and see that the circuit or equipment is ready to be made "alive" as far as they are concerned. The Authorized Person *shall* surrender the Hold to the Control Authority. When surrendering the Hold, the Authorized Person *shall*:

a) State their name, type of Hold, and Hold number.

b) Confirm that everyone working under their Hold is in the clear.

c) Confirm that *all* worker protection applied under the Hold has been removed.

d) Clearly explain *all* changes made which affect operation, such as reduced capacity, increased load or new circuit configuration. Reference should be made to appropriate circuit diagrams applying to the change.

After the Authorized Person has surrendered their Hold, the Control Authority shall:

a) Check their diagram and records to see that any changes made do not affect any other outstanding Hold. If not, the circuit or equipment will be made ready for service as required.

b) A complete record shall be made of all transactions relating to a Hold. All records, including Request for Hold, Hold Sheet, Tags, Switching Orders, etc., shall be returned to the Control Authority for filing upon completion of the work.

109.9 SPECIAL CASES

In general, all of the protection required for a given job shall be done under one Hold. In special cases, when operating conditions necessitate that part of the circuit or equipment covered be returned to service before the completion of the whole job, the protection may be accomplished by two Holds granted to one Authorized Person. All persons so protected shall be specifically advised of the conditions at all times.

If more than one party or crew desires to work on the same section of a circuit or on the same piece of equipment, the Authorized Person of each party or crew must obtain a separate Red Hold. All switches, valves, etc., which can be used to make that circuit or equipment "alive" must be red tagged for each Authorized Person unless otherwise red tagged in accordance with provisions outlined as follows:

a) When necessary for operating convenience, a single red tag used as a Control Authority's tag, may be placed on an isolating point at a remote location when it is known or anticipated that more than one Hold WILL be required before the work is completed. The words "CONTROL AUTHORITY" shall appear on the tag in the space normally provided for the Red Hold number. No Hold can be granted with all Control Authority tags.

b) A qualified person may desire to work on a section of line, of which a portion is within the limits of an existing Red Hold. The Control Authority MAY have Red Tags placed for the Authorized Person at all necessary isolating points so as to increase, but never to decrease, the section on which the Authorized Person has protection. The Control Authority may then have the Red Tags between the extended points of protection removed. The Control Authority shall notify the Authorized Person affected by these changes. The qualified person may then be granted a Red Hold to perform their work covering the same equipment as the extended Red Hold.

c) Since there are different levels of Control Authorities on our system to cover all the various classes of circuits and equipment, the higher Control Authority will be permitted to take control from, or pass control to, a lower, or Sub-Control Authority, as emergencies, lack of communications, or specific complexities of the system dictate.

d) The Control Authority may grant switching and tagging protection on circuits or equipment controlled by the City of Gardner to a recognized dispatching authority of other companies in accordance with the provisions outlined in the OBTAINING A HOLD section herein.

If for any reason it is not possible to comply with the rules of the Hold Procedure, the department supervisor in charge of the work or their designated representative shall be advised at once. The Control Authority and the Department Director or their designated representative shall decide what emergency action shall be taken.

NOTE: The type of equipment used on certain portions of the system may make it impossible to comply completely with all of these rules. In such cases, adequate protection of employees working on that equipment *shall* be made by mutual agreement of the Authorized Person, supervisor, Control Authority and Department Director.

10-110 EMERGENCY ACTION PLAN

110.1 EMERGENCY ESCAPE PROCEDURE AND ROUTE ASSIGNMENTS

Employees shall evacuate the buildings through any designated exit. A floor plan of the building with the evacuation routes shown shall be posted.

Evacuation initiation will be at the direction of the City Administrator, Department Director, supervisor, or their designee.

Each Department Director or supervisor shall account for each employee under their supervision by actual head count once the evacuation has been completed.

City of Gardner Public Safety Department personnel will be responsible for any injured employee until medical help is provided.

The Department Director or supervisor shall be responsible for reporting the emergency to the proper authority either by telephoning 911, by radio, or directly.

110.2 EMERGENCY ACTION PLAN GUIDELINES

The Department Director or supervisor shall ensure that employees:

a) Know the location of all exits from the building.

b) Know the location of fire extinguishers.

c) Learn to operate fire extinguishers properly.

d) Be familiar with alarm system used for their building.

e) Report fire and other emergencies by telephoning 911 and notifying the supervisor or Department Director immediately.

f) Follow evacuation instructions and emergency duties according to the emergency plan or as instructed by the supervisor or Department Director.

g) Maintain order during the evacuation procedure:

110.3 NOTIFICATION

An internal alarm system for notifying employees of an emergency shall be established for each location. In addition to the primary alarm system, a backup system shall be established.

Notification of authorities shall be by phone, radio, or direct contact.

A backup employee should be available and knowledgeable of the correct procedures for notifying authorities.

110.4 EXITS

a) All exits shall be clearly marked.

b) All evacuation routes shall be clearly marked.

c) All exits shall be kept cleared of obstructions.

d) Locked exits shall allow for evacuation from the inside.

e) Each building shall have a primary as well as an alternate escape route.

110.5 SUPERVISORY DUTIES

Supervisors shall:

a) Train new employees on the established emergency action plan.

b) Review emergency action plan with all employees on a periodic basis.

c) Train employees on the location and proper use of fire extinguishers.

110.6 DEPARTMENT DIRECTOR DUTIES DURING EMERGENCY

The City Administrator, Department Director, or supervisor shall:

a) Initiate the alarm system and notify the proper authorities.

b) Monitor the evacuation and exit procedures to insure orderly conduct.

c) Secure the building and/or department following the evacuation.

d) Account for each employee after the building has been evacuated.