



CITY OF KALISPELL

**SAFETY
&
HEALTH
MANUAL**

FIRST EDITION
October 23, 2007

**CITY OF KALISPELL
SAFETY & HEALTH MANUAL**

TABLE OF CONTENTS

General Policy Statement	3
Key Word(s) Definitions	4
General Safety Programs	5
Table of Organization	7
Safety Committee	9
Accident Analysis Policy	11
Injury/Illness & Incident Reports	14
Accident Treatment Policy	16
Personal Protective Equipment (PPE)	22
Hard Hats	22
Hearing Protection	22
Eye and Face Protection	23
Foot Protection	23
Hand Protection	23
High visibility apparel (Vests, Shirts, Outerwear)	24
Safety Training	25
Contractor Safety Program	26
Confined Space Policy (Entering and Working in)	27
List of Confined Space Terms	27
Identifying Confined Spaces	30
Identifying Confined Space Hazards	31
Personnel Responsibilities & Training	39
Signs & Symptoms	42
Facility Security Policy	43
Hazard Communication Standard	44
Lock-Out/Tag-Out Policy	48
Scope	48
Purpose	48
Definitions Applicable to this Program	48
Authorization	49
Rules	49
Techniques	51

Worksite & Office Safety Policy	54
Fall Prevention from Heights Guidelines	64
Compresses Gas Cylinders – Storage & Use	65
Purpose.....	65
Using and Transporting Gas Cylinders	65
Gas Cylinder Storage.....	66
Heat Stress in the Workplace.....	67
Frostbite and Hypothermia.....	69
Portable Fire Extinguisher Policy	70
Sling, Shackle & Hook Inspections.....	75
Respirator Protection Policy	81
Portable Ladder Safety.....	87
Crane and Hoist Operation Safety	89
Traffic Control Devices and Lane Closure Policy	92
Trenching and Shoring Safety Policy.....	100
Vehicle Safety Policy.....	115
Workplace Violence Policy.....	117
New Employee Safety Orientation Checklist	118
Confined Spaces Entry Permit	119
Permit Required Confined Space Decision Tree.....	123
Is it a confined space? Decision Tree.....	125
Ladder Inspection Checklist	127
Trenching and Excavation Checklist	129
Vehicle Pre-Operation Safety Checklist	131
Safety Audit Checklist	132

CITY OF KALISPELL

General Policy Statement

The City's policy is:

To provide a safe and healthful place of employment for every employee;

To abide by accident prevention regulations set forth by the federal, state, and local governments;

To provide rules and regulations for the safety of employees and to warn them under certain conditions, as to the hazards of their position or employment;

To furnish reasonably safe machinery or instruments. Included is the duty to inspect and repair by both supervision and the employees who operate them;

That the rules listed on the following pages should be strictly observed at all times. Although these rules are considered to be very important, it is impossible to publish a rule to cover every circumstance and should not be considered all inclusive. If a rule that might cover any specific safety hazard condition has been omitted, that shall be no excuse for carelessness or a disregard of common sense in the performance of your work. Safety should always be at the forefront and the use of common sense

You are urged to cooperate fully. Abuse or a disregard of these rules is a violation of City policy and will be treated accordingly. Remember, your help in preventing accidents benefits you and your fellow employees. We should all strive for a record of zero accidents/events.

**CITY OF KALISPELL
SAFETY & HEALTH MANUAL**

Key Word(s) Definitions

Event - In the context of this manual an event is defined as occupational injury or illness, damage to property, or a “near miss.” The theory being that with few exceptions job-related injuries, illnesses, property damage and “near misses” don’t happen by “accident” and are preventable.

Event Analysis – Is a fact finding activity with the basic purpose to determine the cause and what measures can be taken to prevent similar events in the future.

Confined Space – Is an area large enough or so configured that an employee can bodily enter and perform assigned work, has limited or restricted means of entry or exit, and is not designed for continuous employee occupancy. The danger associated with entry may come from chemical or physical hazards within the space.

Hazard Communication Standard - Employee Right to Know – Federal standard where employees have the right to know the properties and potential safety and health hazards of substances to which they may be exposed.

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

Material Safety Data Sheet (MSDS) – is a document providing both workers and emergency personnel with the proper procedures for handling or working with a particular substance. MSDS's include information such as physical data (melting point, boiling point, flash point etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill/leak procedures.

Near Miss – A situation wherein if circumstances would have been different extensive property damage, serious injury or death could have resulted.

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

City of Kalispell

General Safety Programs

A. Purpose

- a. The City's primary objectives are to ensure the safety and health of our Employees, Citizens, Contractors, etc., and to protect property.
- b. Most accidents/events are preventable. A positive safe attitude, combined with using established safety programs is paramount and will result in a safe working environment. Events can be prevented if everyone uses assigned safety equipment and follows the established safety rules. To operate a safe and successful City, we must work as a team.
- c. This safety program has been and will continue to be developed with input from Management, Supervision and Employees.
- d. Each Employee shall become familiar with and follow General and Departmental Safety Programs and Rules.
- e. Supervisors must enforce Safe Work practices through strict adherence to the Safety Programs.

B. Communication of Safety Programs are accomplished by:

- a. Discussion of safe work practices
- b. Safety handbooks, publications and posting at all facilities
- c. Initial attendance at safety training and then subsequent refresher training
- d. On-the-spot corrections and reinforcement of safety rules and procedures

C. Operating Safety Rules

- a. The City has additional safety rules for specific operations and departments that apply to those engaged in hazardous work areas or operations. Examples of these rules are contained in other safety manual chapters and Standard Operating Procedures (SOP) -Standard Operating Guidelines (SOG) such as those for:
 - i. Lockout - Tag out
 - ii. Confined Space Entry
 - iii. Traffic Control

THINK SAFE, WORK SAFE, AND BE SAFE

City of Kalispell List of General Safety Rules

A. General Safety Rules

- 1. Report the following immediately to your Supervisor:**
 - a. All work related injuries, illnesses and “near misses”**
 - b. Property damage as a result of City operations**
 - c. All Unsafe Acts or Unsafe Conditions**
- 2. Use seat belts when on City business in any vehicle or equipment, if so equipped.**
- 3. Only authorized and trained Employees may possess firearms, weapons, or explosives on City of Kalispell property or while “on duty”.**
- 4. Use, possession, sale or being under the influence of illegal drugs, misuse of prescription drugs and/or alcohol is not permitted on City Property or while “on duty”.**
- 5. Only authorized and trained Employees may enter a posted Confined Space. All confined spaces will be posted Confined Space - Permit Required. Entry is allowed only after permits are properly issued.**
- 6. Only qualified and trained Employees may dispense or use chemicals. It is your responsibility to know where MSDS’s are located for your use and review.**
- 7. Only authorized and trained Employees may repair or adjust machinery and equipment. Lock and Tag out Procedures must be followed before removing any machine guards or working on powered machinery and equipment. Replace all guards when the job is completed.**
- 8. Only qualified and trained Employees may work on or near exposed and energized electrical parts or electrical equipment. Follow electrical safety rules when working with electrically powered machinery and equipment.**
- 9. Keep work areas clean and aisles clear and clean up spills.**
- 10. Wear and use the prescribed Personal Protective Safety Equipment. This includes foot protection, head protection, gloves, etc.**
- 11. Smoking is permitted only in the designated “Smoking Areas”.**
- 12. All City of Kalispell vehicles will be inspected daily prior to initial use.**

Failure to follow the above rules may cause serious injury and/or illness. Disciplinary action, up to and including termination, will be used to assure rule enforcement. Please use common sense and think before you act. If you are not sure how to complete a job or task safely or have any questions, ask your supervisor.

CITY OF KALISPELL
Table of Organization

General

An effective safety program must include a complete and clear description of safety responsibilities for all employees. It is important for everyone to understand not only their responsibilities but also the responsibilities of fellow employees.

All levels of management and supervision are charged with the responsibility of preventing conditions that could lead to occupational injury or illness. While the ultimate success of our safety and health program depends upon the full cooperation of each employee, it is management's responsibility to see that safety and health rules and procedures are adequate and enforced, and to see that effective training and education programs are employed to the best advantage.

This section describes key roles and responsibilities of people involved in the Safety Program. The positions covered include: City Manager, Safety Committee, Supervisor and Employee.

A. City Manager

- a. Be informed of all events and investigation reports
- b. Track all safety and workers' compensation statistics
- c. Promote and communicate safety information
- d. Appoint Safety Coordinator
- e. Approve special safety programs
- f. The City Manager will select one person to act as Event Prevention Coordinator

B. Safety Coordinator & Safety Committee Chairperson

- a. Update Safety Policies and Procedures Manual
- b. Establish annual City safety goals
- c. Monitor Safety Program - Ensure safety committee meetings take place and safety training is conducted
- d. Coordinate all safety audits as needed
- e. Ensure timely and accurate event reporting
- f. Coordinate preparation of Quarterly Event Summary Reports and Incident Rate Statistics
- g. Communicate safety information
- h. Recommend improvements in the Safety Program
- i. Assist with safety activities and reporting issues
- j. Assist in investigating unsafe conditions and events
- k. Assist in training new and existing employees
- l. Maintain safety records and information
- m. Set an example of safe working habits and follow all safety regulations

C. Safety Committee

- a. The Department Director / Chief or designates will appoint people as necessary to serve as Safety Committee Member.
 - i. Recommend safety training sessions
 - ii. Assist Safety Coordinator in conduction of safety audits
 - iii. Assist Safety Coordinator in monitoring Safety Program activities
 - iv. Recommend improvements in the Safety Program, including policies and procedures
 - v. Set an example of safe working habits and follow all safety regulations

D. Supervisor

- a. Responsible for the safety of employees reporting directly to them, as well as the safety of others who may enter their work area, including the public
- b. Communicate and enforce all safety policies and procedures within their operations
- c. See that all injuries are promptly treated and reported
- d. Instruct employees of hazards on the job, appropriate emergency procedures and how to avoid injury
- e. Assist in training new and existing employees
- f. Investigate, document and implement correct actions of all events and injuries.
- g. Periodically inspect all work areas to ensure that work practices and equipment are meeting established safety standards
- h. Ensure safety devices and personal protective equipment are provided and used
- i. Take immediate corrective action whenever unsafe conditions and/or unsafe acts are noted
- j. Recommend improvements in the Safety Program
- k. Set an example of safe working habits and follow all safety regulations
- l. Investigate all reported hazards, take corrective action and/or report to Safety Committee

E. Employee

- a. Read, understand, and follow all City of Kalispell safety policies and procedures
- b. Recommend improvements in the Safety Program
- c. Perform duties in a safe manner
- d. Report all unsafe acts and conditions
- e. Report all events
- f. Wear all personal protective equipment as intended that is required and maintain the equipment in good condition
- g. Set an example of safe working habits and follow all safety regulations

City of Kalispell Safety Committee

A. Function

- a. The Safety Committee provides an important communications link allowing management, supervisors, and employees to share information and concerns related to safety with the intent to provide for the safety and welfare of all employees.

B. Organization

- a. The Committee must be composed of a representative group of City Employees from all Departments. It is important to include representatives from each functional area. The total number serving on the Committee should be kept small to facilitate better communication during meetings, and to achieve better results.
- b. There are three positions on the Safety Committee: Chairperson, Recorder, and Committee Member. The responsibility of each position is reviewed in the following text.

C. The Chairperson is responsible for:

- a. Scheduling and presiding over safety committee meetings and distributing the agenda
- b. Prioritize and delegate assignments. Ensure follow-up action is taken
- c. Ensure all committee members are aware of their responsibilities and perform their duties
- d. Make sure safety program deadlines are met
- e. Communicate effectively with the City Manager, Safety Coordinator, Supervisors, and Employees
- f. Make sure minutes are typed and copies are properly distributed and posted in designated locations
- g. Set an example of safe working habits and follow all safety regulations

D. Committee Member Size

- a. There is no required number of members for a Safety Committee. The size of the group is dependent on the staff size and functional make-up. It is important to have representation from all departments, this allows for multiple viewpoints and committee diversity.

E. Duties of the Committee

- a. Attend and actively participate in all Safety Committee meetings
- b. Assist in completing assigned tasks and special safety projects
- c. Encourage open communication between the Safety Committee and all Employees
- d. Set an example of safe working habits and follow all safety regulations
- e. The Committee acts as a sounding board for all personnel on safety matters

F. City Safety Meetings

- a. The committee is responsible for developing the agenda for a general safety meeting to be held once per month. The committee will review minutes of previous meeting and any old business. Other topics include event/event reviews, introduction of new policies, review of old safety procedures, and safety training. This involvement by the Committee ensures the meeting will be topical and informative.

G. Safety Training

- a. The type of training conducted at monthly training sessions is based on requirements established by the Safety Committee. The Safety Committee is responsible for choosing of subjects which are meaningful and timely. The Committee guides and supports the safety training effort to ensure quality training is provided.

H. Hazard Notification and Mitigation

- a. The Committee will respond to any reported hazard conditions by a department supervisor or its employees. It is important employees first report hazardous conditions immediately to their supervisor for corrective action.

I. Event Review

- a. All events may be reviewed by the Safety Committee. The Committee may provide or recommend corrective actions, and be involved with follow up activities.
- b. The Committee is responsible for developing safety policies and procedures and communicating that information to all employees.

City of Kalispell

Event Analysis Policy

A. Purpose

- a. Event prevention and control of hazards is the result of a well-designed and executed safety and health program. One of the keys to a successful program includes unbiased, prompt and accurate event analysis. The basic purpose of the analysis is to determine measures which can be taken to prevent similar events in the future. This chapter addresses:
 - i. City Policy
 - ii. Responsibilities
 - iii. Hazard Control
 - iv. Role of Supervisors
 - v. Analysis Procedures

B. Policy

- a. It is the policy of the City of Kalispell that all analysis for work related events, injuries and illnesses are to be conducted in a professional manner to identify probable causes and are used to develop specific management actions for the prevention of future events.

C. Responsibilities

a. Management

- i. Conduct event prevention and analysis training for supervisors
- ii. Ensure all events and injuries are properly analyzed
- iii. Ensure immediate and long term corrective actions are taken to prevent reoccurrence
- iv. File and maintain event reports permanently
- v. Provide all necessary medical care for injured workers

b. Supervisors

- i. Conduct immediate initial event analysis
- ii. Report all events to management as soon after the event as possible
- iii. Collect and preserve all evidence which may be useful in an analysis
- iv. Conduct interviews of witnesses in a polite professional manner
- v. Do not attempt to find or assign blame for events
- vi. Take action to protect people and property from secondary effects of an event

c. Employees

- i. Immediately report all events and injuries to their supervisor
- ii. Assist as requested in any event analysis
- iii. Report all hazardous conditions and near-misses to supervisors

D. Hazard Control

- a. *Engineering Controls* - There are numerous engineered safeguards throughout the City used to protect employees and prevent exposure to hazards. Examples of engineering controls are, but not limited to: machine guards, safety controls, isolation of hazardous areas and monitoring devices. Specific engineering controls are addressed in other chapters of the City safety manual and in equipment and process procedures.
- b. *Administrative Controls* - Involve the use of procedures, assessments, inspections, and records to monitor and ensure safe practices and environments are maintained. Other administrative controls identify new hazards and implement corrective action. Examples of administrative controls are, but not limited to: Periodic inspections, equipment operating and maintenance procedures, hazard analysis, and selection and assignment of personal protective equipment.
- c. *Training Controls* - This aspect of hazard control is used to ensure employees are fully and adequately trained to safely perform all tasks to which they are assigned. No employee shall attempt any task without proper training in the equipment, required personal protective equipment, specific hazards, and control and emergency procedures. Examples of training controls are initial new hire safety orientation, job specific safety training and periodic refresher training.

E. Supervisor Involvement

- a. The immediate supervisor will conduct the initial phase of an event analysis. This initial activity is primarily a recording of facts involved in the event and a list of affected employees and witnesses. The immediate steps are:
 - i. Provide First Aid for any injured persons
 - ii. Eliminate or control hazards
 - iii. Document event scene information and collect evidence
 - iv. Interview witnesses immediately
 - v. Contact Human Resources

F. Steps of an Event Review

- a. Secure the area. Do not disturb the scene unless a hazard exists.
- b. Prepare the necessary sketches and photographs. Label each carefully and keep accurate records
- c. Interview each victim and witness. Also interview those who were present before the event and those who arrived at the site shortly after the event.
 - i. All interviews should be conducted in a quiet and private location. It is essential to get preliminary statements as soon as possible from all witnesses. Analyst should not provide any facts to the witness - only ask non-leading questions.
 - ii. Explain the purpose of the analysis (event prevention) and put each witness at ease.
 - iii. Listen, let each witness speak freely, and be professional, courteous and considerate.

- iv. Take notes without distracting the witness.
- v. Use sketches and diagrams to help the witness.
- vi. Emphasize areas of direct observation, Label hearsay accordingly.
- vii. Do not argue with the witness
- viii. Record the exact words used by the witness to describe each observation.
- ix. Identify each witness (name, address occupation, years of experience, etc.)
- x. Keep accurate records of each interview and determine:
 - 1. What was not normal before the event?
 - 2. Where the abnormality occurred.
 - 3. When it was first noted.
 - 4. How it occurred.

G. Follow-up Event Analysis

- a. The follow-up analysis is used to:
 - i. Analyze the data obtained in the initial investigation.
 - ii. Determine the causes, why the event happened and take corrective actions necessary to prevent reoccurrence.
 - iii. Prepare a summary report, including the recommended actions to prevent a recurrence.

H. Analysis Report

- a. An event analysis is not complete until a report is prepared and submitted to management. To be an effective tool, an event report should be clear and concise. The purpose of the analysis is to prevent future events. The following outline is useful in developing the information to be included in the formal report (See Appendix for examples of Injury/Illness and Incident Reports):
 - i. Background Information
 - 1. Where and when the event occurred.
 - 2. Who and what were involved.
 - 3. Operating personnel and other witnesses.
 - ii. Account of the Event (What happened?)
 - 1. Sequence of events
 - 2. Extent of damage.
 - 3. Event type
 - iii. Discussion (Analysis of the Event; HOW, WHY)
 - 1. Direct causes (energy sources, hazardous materials) Examples are:
 - a. Unsafe Conditions
 - b. Ergonomic hazards
 - c. Environmental hazards
 - d. Inadequate housekeeping
 - e. Blocked walkways

- f. Improper or damaged PPE
- g. Inadequate machine guarding
- h. Indirect causes (unsafe acts and conditions) Examples are:
 - i. Unauthorized operation of equipment
 - ii. Running - Horse Play
 - iii. Not following procedures
 - iv. By-passing Safety Devices
 - v. Not using protective equipment
 - vi. Under influence of drugs or alcohol
- i. Basic causes (management policies, personal or environmental factors)
- iv. Recommendations'(to prevent a recurrence) for immediate and long-range action to remedy
 - a. Basic causes
 - i. Example – alter management policy / procedures.
 - b. Indirect causes
 - i. Example – retrain employee in proper safety procedure
 - c. Direct causes (such as reduced quantities or protective equipment “PPE” or structures)
 - i. Example – Install machine guarding or changing work station design

I. Job Safety Analysis

- a. Formal procedures are helpful in identifying and solving problems. In general, a JSA breaks a job into basic steps, and identifies the hazards associated with each step. The JSA:
 - i. Also prescribes controls for each hazard.
 - ii. Is a chart listing these steps, hazards, and controls.
 - iii. Allows for the review during the analysis to see if a JSA has been created for the job involved in an event.
 - iv. The creation of a JSA, if one is not available.
 - v. Is used as a training tool (initial and refresher) for employees.

J. Injury/Illness Report

- a. Employees reporting an injury / illness will be required to complete an Injury / Illness report immediately (within the same shift) with City of Kalispell explaining the details of the incident.
 - i. Employees reporting an injury or illness are to use a City of Kalispell Injury/Illness report

- ii. The employee's supervisor should complete the report to ensure that it can be completed correctly, to understand what has occurred, and begin the event investigation
- b. All Injury/Illness and Incident reports will be maintained on file permanently. All event reports shall receive timely review by the safety coordinator to ensure proper corrective actions have been taken.

K. Incident Reports

- a. Incident reports are to be filed for the following:
 - i. Event that does not result in an employee being injured, but:
 - 1. There was damage to equipment / property and/or;
 - 2. Any claims by non-city employees (citizens) who claim damage to personal property by city workers or sustain an injury while using or being on City of Kalispell property.

L. Injury/Illness and Incident Reports – When both are required

- a. Should an employee be injured and there also is damage to equipment or a vehicle as a result thereof, both an Injury/Illness and Incident Report will be required.

City of Kalispell
Injury / Illness Treatment Policy

A. Purpose

- a. To ensure injured or ill employees receive prompt and professional medical attention.

B. Policy

- a. All employees are responsible for immediately reporting all events to their supervisor.
- b. It is the responsibility of the supervisor to ensure prompt first-aid or medical attention is provided.
- c. All appropriate event procedures set forth in this section will be followed in a timely manner.

C. Procedures

- a. Once an event is reported to the supervisor, the following action shall be taken:
 - i. Upon notification of an injury, determine if medical attention is required. When it is questionable as to whether onsite first-aid or professional medical attention is needed, call for outside medical assistance.
 - ii. If emergency first-aid treatment is required, trained (first-aid, CPR, etc.) personnel designated should be immediately contacted to provide appropriate treatment.
 - iii. If an ambulance or paramedics are required:
 - 1. Contact your Communication Center by radio or dial 911 immediately,
 - 2. Designate an emergency and provide the following information:
 - a. Your name and assigned radio number,
 - b. Name of the location from which you are calling, the address and telephone number if calling by phone,
 - c. Specify “This is an emergency personal injury” and request immediate assistance,
 - d. Stand by, or delegate someone to stand by until operator acknowledges they have all the necessary information and;
 - e. Stand by, or delegate someone to stand by for a return call.

D. If the injured person is unconscious or incapable of describing the injury, another employee should accompany him/her to the hospital. This should be the same person who provided first-aid and/or the person with the most complete knowledge of the event.

E. In all cases where CPR is administered, the person administering the CPR should accompany the injured person to the hospital.

- F. If an ambulance is not needed, the injured employee should be sent to the designated hospital emergency room.
 - a. Transport the injured employee to the hospital emergency room in a City vehicle driven by another City employee, who will wait until medical treatment is completed. The transporting employee shall contact their Department Superintendent and/or supervisor to advise him of any changes or special instructions that are given by emergency room staff or doctor.
- G. Under no conditions should an injured employee be permitted to drive himself/herself to the emergency room, no matter how slight the injury may appear to be.
- H. Notify your immediate supervisor, who is also to report the injury to the Department Director and the Human Resources Director.
- I. All serious injuries that result in hospitalization or death are to be immediately reported to the City Manager.
- J. Due to liabilities, injured members of the public are not to be transported by City vehicles for medical care other than City ambulance or law enforcement.

City of Kalispell
Safety Audits and Inspections

A. Purpose

- a. Inspection of work areas and audits of safety programs are tools used to identify problems and hazards before conditions cause accidents or injuries. Audits also help to identify the effectiveness of safety compliance programs and a safe workplace.

B. Responsibilities

- a. Department Heads
 - i. Design and schedule audit and inspection procedures for their work areas of responsibility.
 - ii. Ensure supervisors and employees understand the various safety programs and policies.
- b. Supervisors
 - i. Conduct informal daily safety inspections and ensure all unsafe conditions are corrected.
 - ii. Conduct documented monthly or as scheduled, inspections and ensure all unsafe conditions are corrected.

C. Types of Inspections

- a. **Supervisor Informal Walk-through:** This is an undocumented inspection made daily to ensure the facility and equipment are in a safe condition for employees
- b. **Focused Monthly Safety Inspection:** Formal inspections of a Department or an area within a Department will be conducted on a timeline commensurate with the level of risk present to the staff and/or the public.
 - i. Attendees should include:
 - 1. Department Head
 - 2. Supervision
 - 3. Safety Coordinator
 - 4. Employee representative and/or Safety Committee member.
 - a. Using an Inspection/Audit report approved by the Department Head and Safety Coordinator, problem areas and deficiencies will be documented and corrective actions noted. Where deficiencies cannot be corrected immediately, interim safety measures will be done and recommendations for corrective action forwarded to the Department Head.

- c. **Equipment Inspections:** are conducted to ensure specific safety equipment is in good working order and will function when needed. Examples and frequencies are:
 - i. Fire Sprinkler Inspection - Monthly
 - ii. Emergency Lighting Test - Monthly
 - iii. Fire Extinguisher Inspections - Monthly
 - iv. Safety Equipment Inventories - Monthly
 - v. Respirator Inspections - Before/After Use (Monthly at a minimum)

- d. **Program Audits:** are conducted to check the administration of specific safety and health programs. Examples of program audits may include, but not limited to:

i. Accident Prevention	ix. Confined Space Entry
ii. Emergency Responses	x. Contractor Safety
iii. Fire Prevention	xi. Blood borne Pathogens
iv. Material Handling	xii. Electrical Safety
v. Flammable Material Storage	xiii. Tool Safety
vi. Lockout-Tag out	xiv. Hot Work
vii. Hazard Communication	xv. Respiratory Protection
viii. Personal Protective Equipment (PPE)	

D. Correcting deficiencies

- a. All safety deficiencies and conditions which present hazards found during audits and inspections are to be corrected or controlled immediately. Documentation of corrections will be made on the audit or inspections sheet.

E. Records

- a. Records of audits and inspections will be maintained in accordance with the requirements of the specific programs. Routine inspection records will be maintained on a most current basis. Records of deficiency corrections will be maintained for three calendar years from date of correction.

F. Conducting Formal Safety Audits - Audit Areas - Most audits can be broken down into these areas:

- a. **Employee Knowledge** - The City Safety Manual requires “effective training” - an effective program ensures employees have the knowledge required to operate in a safe manner on a daily basis. The level of knowledge required depends on the specific duties and responsibilities of the job. Determining employee level of knowledge can be achieved through:
 - i. Written quizzes
 - ii. Formal interviews or;
 - iii. Informal questions in the workplace or;
 - iv. By demonstration.

- b. **Authorized employees** - Supervisors and department heads are classified as “authorized” employees.
 - i. Generally, supervisors and department heads should have a higher level of knowledge than general employees. This includes practical knowledge of program administration, management, and training. They should be able to discuss all elements of each program affecting their assigned employees.
- c. **Written Program Review** - During the audit, a comprehensive review of the written program should be conducted. This review compares the City program to requirements for hazard identification and control, required employee training and record keeping against local, state, and federal requirements.
- d. **Program Administration** - This review checks the implementation and management of specific program requirements. This section asks these and other similar questions:
 - i. Is there a person assigned and trained to manage the program?
 - ii. Are specific duties and responsibilities assigned?
 - iii. Are sufficient assets provided?
 - iv. Is there an effective and on-going employee-training program?

G. Safety Audits - Four basic questions an audit should answer. The persons or team designated to conduct the audits should take a fact-finding approach to gather data. These auditors should be familiar with both the City program and the various local, state, and federal requirements. All audits comments, recommendations and corrective actions should focus on these four questions:

- a. Does the program cover all regulatory and best industry practice requirements?
- b. Are the program requirements being met?
- c. Is there documented proof of compliance?
- d. Is employee performing work in a safe manner?

H. Phase One: Audit Preparation

- a. Step One - Determine the scope of the audit. This can be based on accident and inspection reports and input from various supervisors and/or department head. Set a start and stop time & date for the audit.
- b. Step two - Schedule and inform all affected individuals. They should be directed to have all records, documents and procedures available when audits start.
- c. Step Three - Review past program audits and corrective action recommendations.
- d. Step Four - Review all City, local, state, and federal requirements for the specific program. Become familiar with documentation, inspection, and training requirements.
 - i. Missing or incomplete documents or records are a good indication a program is not working as designed. Records are the City’s only means of proving specific regulatory requirements have been met. Record review also includes a look at the results, recommendations, and corrective actions from the previous program audit.

I. Phase Two: General Area Walk-Through

- a. While audits are not designed to be comprehensive physical wall-to-wall facility inspections, a general walk-through of work areas can provide additional insight into the effectiveness of the safety programs. Auditors should take written notes of unsafe conditions and unsafe acts observed during walk-through.
- b. Equipment and Material – This area of an audit inspects the material condition and applicability of the equipment for hazard control in a specific program. Examples of audit questions for this area are:
 - i. Is the equipment in a safe condition?
 - ii. Is there adequate equipment to conduct tasks safely?
 - iii. Is personal protective equipment used and stored properly?
 - iv. Is equipment, such as exit lights, emergency lights, fire extinguishers, material storage, and equipment handling designed and staged to control hazards effectively?

J. Phase Three: Review of Findings

- a. After all documents, written programs, procedures, work practices, and equipment have been inspected; the audit team must formulate a report detailing all areas of the audit. Focus on the four basic audit questions. Each program requirement should be addressed with deficiencies noted. Include comments of a positive nature for each element being effectively managed.

K. Phase Four: Recommendations

- a. Develop recommended actions for each deficient condition of the program. Careful forethought should be applied to ensure this is not a process simply making more rules, additional record keeping requirements, or making tasks more difficult. Examine the manner and means in which the procedure can be employed.

L. Phase Five: Corrective Actions

- a. Development of corrective action should involve the supervisors and department heads who are required to execute the corrections.
- b. Set priorities based on the level of hazard.
- c. All corrective actions should be assigned a completion and review date.
- d. Records of completed corrective actions should be reviewed through the normal management chain and then be filed for use during the next audit.

City of Kalispell
Personal Protective Equipment (PPE)

A. Purpose

- a. Personal protective equipment (PPE) is an important cornerstone of a safety program. The use of PPE is a critical step in the protection of workers and is never to be taken lightly.

B. Hard Hats

- a. OSHA approved hard hats are required for the following jobs:
 - i. Building construction sites
 - ii. Excavation sites
 - iii. Road construction and sign installations
 - iv. Working on or within close proximity of city streets
 - v. Where danger from electrical hazards exist
 - vi. Where there is risk of overhead or side impact from objects
 - vii. Tree / brush cutting &/or trimming.
- b. Hard hats must, at a minimum, meet current OSHA Class A Level, which protects against impact hazards and provides limited voltage protection (up to 2,200 volts).
- c. Bump Style Caps are not allowed.
- d. Hard hats are to be inspected, maintained and worn in accordance with the manufacturer's recommendations.
- e. Hard hats that sustain a heavy impact are to be taken out of service.

C. Hearing Protection

- a. Hearing loss can be subtle and can occur over a period of time without the employees knowledge. By taking appropriate preventative measures in noisy environments, employees will limit such losses.
- b. Employees should carry appropriate hearing protection with them at all times.
- c. **A good rule of thumb when to wear hearing protection; Anytime you need to raise your voice to be heard, you should wear hearing protection.**
- d. Single level hearing protection (either plugs or muffs) is required when operating in the or near the vicinity of:
 - i. Impact wrenches.
 - ii. Chipping guns, jackhammers or Teledyne hammers.
 - iii. Air arc cutting, high speed saws, mechanical hammers or portable grinders.
 - iv. Skidsteers/Bobcats

- v. Loaders, excavators, graders, Supervac truck, etc.
- vi. Sandblasting
- vii. Lawn Mowers
- viii. Gas Powered Weed Trimmers, Leaf blowers and Chainsaws

D. Eye and Face Protection

- a. Personnel shall use appropriate eye or face protection (glasses &/or face shields or goggles) when working with liquid chemicals, acids, caustic liquids, chemical gases or vapors, molten metal, cryogenic liquids, potentially injurious light radiation, cutting and welding, and flying objects/particles.
- b. Protective eye and face equipment shall comply with ANSI Z87.1-1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection". "Z87" and the name of the manufacturer shall be stamped on the frame.
- c. Personnel wearing contact lenses shall exercise extreme care when working with liquid chemicals, gases, or vapors. Non-gas permeable contact lenses shall not be worn in these types of operations due to the increased risk of eye injury in the event of an exposure to a chemical.
- d. OSHA approved face shields are required to be worn anytime portable or stationary grinders are being used.

E. Foot Protection

- a. Employees shall wear appropriate foot protection when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, where an employee's feet are exposed to electrical hazards, and/or where there is a slipping hazard.
- b. Open-toed shoes, sandals, flip-flops, etc. shall not be worn into any area where there is a potential for foot injuries as noted above.

F. Hand Protection

- a. Employees shall use appropriate hand protection when hands are exposed to potential hazards such as those from skin absorption of harmful substances, contact with acids or caustics, severe cuts or lacerations, abrasions, punctures, electrical/thermal/chemical burns, and harmful temperature extremes.
- b. There is no single glove which provides protection against all potential hand hazards, and commonly available materials provide only limited protection against chemical and physical hazards.
- c. It is important to select the most appropriate glove for a particular application and to determine how long it can be worn effectively. Consider work activities, degree of dexterity required, duration, frequency, degree of exposure, physical stresses, and toxic properties of chemicals.

- d. When working with liquid hazardous chemicals, gloves such as rubber, nitrile, neoprene, PVC, butyl rubber, latex shall be selected based on permeability, toxicity, and corrosivity of the material.
- e. Leather or cotton gloves shall be worn when there is a potential for injury from being struck against, caught between, cut, or punctured; and materials handling. These types of gloves shall not be worn for protection from liquid or hazardous materials.
- f. Gloves designed to protect from temperature extremes shall be worn when handling or working with materials or equipment.

G. Respirators

- a. See “Respirator Section” located later in this manual. (Refer to index for page number).

H. High visibility apparel (Vests, Shirts, Outerwear)

- a. All workers are to wear high visibility apparel as required under ANSI 107-2004 anytime they will be working on or within close proximity of city streets, or operating vehicles.
- b. *Class 1 garments* are defined as apparel for use in activities that permit the wearer’s full and undivided attention to approaching traffic, with ample separation of workers from traffic. Examples are: Parking lot attendants and delivery drivers, solid waste personnel.
- c. *Class 2 garments* are defined as apparel for use in activities where greater visibility is necessary during inclement weather conditions or in work environments with risks exceeding those for Class 1 and; who perform tasks that divert their attention from approaching traffic or put them in close proximity to passing vehicles. Examples are: Survey crews, signs & signal personnel and anyone working on or near roadways day or night.
- d. *Class 3 garments* are defined as having the highest level of visibility for workers who face serious hazards and have high task loads requiring attention away from their work. These garments should provide enhanced visibility to more of the body, such as the arms and legs, making the wearer conspicuous through the full range of body motions. Examples are: Emergency response personnel and roadway construction flaggers.

City of Kalispell

Safety Training

A. Purpose

Training is one of the most important elements of any Safety and Health Program. Training is designed to enable employees to learn their jobs properly, reinforce safety policies and procedures. Safety Training also provides an opportunity to communicate Safety principles and commitment of Management to a Safe work place.

B. New Employee Safety Orientation & Training

- a. New Employee Safety Orientation & Training is required for all new hires. This orientation is conducted by the Department Head or their designee. Safety training, at a minimum consists of:
 - i. General Safety Rules and Policies
 - ii. Hazard Communication and Chemical Safety Procedures
 - iii. Hearing Conservation
 - iv. Control of blood, air, organic and biological borne pathogens
 - v. Electrical Safety and Lockout/Tag out
 - vi. Proper lifting and ergonomic techniques
 - vii. Safety equipment, supplies and personal protective equipment PPE
 - viii. Emergency plans, evacuation routes, assembly locations, and emergency actions
 - ix. Rules for reporting safety violations, accidents, and near-misses
 - x. Safe/Standard Operating Procedures and Guidelines
 - xi. Job Safety Analysis
 - xii. Location and use of Emergency Eye Wash and Shower Stations
 - xiii. Location and use of Fire Alarm/Pull boxes
 - xiv. Use of tools and equipment, lifting and material handling equipment
 - xv. Machine and Tool Guards, Emergency Stop Control Locations and Use
 - xvi. Proper Ergonomic procedures and lifting techniques for the tasks assigned

C. Records of all safety training will be maintained by the Department Head or designee.

City of Kalispell Contractor Safety Program

A. Purpose

The Contractor Safety Program is designed to protect the City and contractor employees, equipment, and facilities from injury, accident, or loss. Contractors are persons not directly employed by the City of Kalispell who provide specific labor or services. Examples of Contractor Employers are:

- a. Construction Companies
 - b. Utility Service or Repair Companies
 - c. Pest Control Services
 - d. Transportation and Shipping Services
 - e. Product Suppliers
- B. As a condition of doing business with the City of Kalispell all contractors must comply with applicable local, state, federal regulatory requirements.
- C. **Contractors must provide the City of Kalispell a Certificate of Liability Insurance.**
- a. The Certificate must list the City of Kalispell as an additional insured.

City of Kalispell

Confined Space Policy (Entering and Working in)

A. Introduction

- a. Entering and working in confined spaces has been and will be an integral part of daily activity by City of Kalispell employees. As it is the policy of the City of Kalispell to provide its employees with a safe work environment, the City requires conformance with the safety standards set herein. The program contained herein describes reasonable and necessary policies and procedures for any and facilities, departments, and individuals who are associated with confined space entry operations.
- b. This program and all parts of 29 CFR 1910.146 shall apply to all confined space entry operations conducted in the City of Kalispell. As it is the policy of the City of Kalispell to provide its employees with the safest work environment possible, the City requires conformance with safety standards set herein. A site-specific program may be used, providing it meets or exceeds the requirements set forth in this manual. The Contents of this manual are:

B. Identifying Confined Spaces

- a. Department Heads or their designed representatives should determine if any personnel under their supervision are required to enter or conduct work in confined spaces as defined in this section.

C. Identifying Confined Space Hazards

- a. This section gives information on the types of hazards that may be present on a confined space. It should be reviewed whenever the hazards of a confined space are being evaluated.

D. Confined Space Entry Program

- a. If it is determined that department personnel are required to perform duties in confined spaces, the program outlined in “The Permit system” should be implemented.

E. Responsibilities and Training Requirements

- a. This section lists the responsibilities and training requirements of each individual involved in a confined space entry.

F. List of Confined Space Terms

- a. Authorized Entrant - A person who is approved or assigned by the department head in charge of the entry to perform a specific type of duty or duties or to be at a specific location at the job site
- b. Bonding - The joining of two or more items with an electrical conductor so that all ends joined have the electrical charge or potential

- c. Confined Space – Explained later in the policy
- d. Department Superintendent - Department Superintendent are those people in charge of their respected department
- e. Entry - The action by which a person passes through an opening into a permit-required confined space. Entry includes the ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space
- f. Entry Permit - The written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in this program
- g. Entry Supervisor - Department Superintendent or the designated representative such as a foremen or crew chief who is responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this program
- h. Hazardous Atmosphere - An atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one of more of the following:
 - i. Flammable gas, vapor, or mist in excess 10% of its lower flammable limit (LEL)
 - ii. Airborne combustible dust at a concentration that meets or exceeds its LEL
 - iii. NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less
 - iv. Atmospheric oxygen concentration below 19.5% or above 23.5%
 - v. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart O, Occupational health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of 29 CFR 1910 and that could result in employee exposure in excess of its dose or permissible exposure limit
 - vi. NOTE: Atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision
 - vii. Any other atmospheric condition that is immediately dangerous to life or health.
 - viii. NOTE: For hr contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication

Standard, section 1910.1200, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

- ix. Hot Work - Any work involving burning, welding or similar fire-producing operations. Also, any work that produces a source of ignition such as grinding, drilling, or heating.
- x. Immediately Dangerous to Life or Health (IDLH) - An atmosphere that poses an immediate threat of loss of life that may result in irreversible or immediate severe health effects; may result in eye damage/irritation; or other condition that could impair escape from a confined space.
- xi. Lower Explosive Limit (LEL) - The minimum concentration of a combustible gas or vapor in air that will ignite if an ignition source is introduced.
- xii. Non-Permit Required Confined Space - A confined space that does not contain, nor has the potential to contain, any hazard capable of causing death or serious physical harm (with respect to atmospheric hazards)
- xiii. Oxygen-Deficient Atmosphere - An atmosphere that contains an oxygen concentration of less than 19.5% by volume
- xiv. Oxygen Enriched Atmosphere - An atmosphere that contains an oxygen concentration greater than 22% by volume
- xv. PPE – Personal Protective Equipment - Any devices or clothing worn by the worker to protect against hazards in the environment. Examples are respirators gloves, and chemical splash goggles
- xvi. PEL - Permissible Exposure Level - Concentration of a substance to which an individual may be exposed repeatedly without adverse effect
- xvii. Permit - Required Confined – means a confined space that has one or more of the following characteristics:
 - 1. Contains or has a potential to contain a hazardous atmosphere
 - 2. Contains a material that has the potential for engulfing an entrant
 - 3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly-converging walls or by a floor that slopes downward and tapers to a smaller cross-section; or
 - 4. Contains any other recognized serious safety or health hazard.
- xviii. Purging - The removal of gases or vapors from a confined space by the process of displacement

- xix. Standby Person - A person designated by the department head in charge of entry to remain outside the confined space and to be in constant communication with personnel working inside the confined space

G. Identifying Confined Spaces

- a. The first step toward conducting a safe confined-space entry is to identify the space as potentially dangerous. All Confined Spaces shall be considered “permit-required” until pit-entry procedures demonstrate otherwise. To clarify what constitutes a Confined Space, the following definition will be used.

H. A Confined Space is any space that has the following characteristics:

- a. Large enough or so configured that an employee can bodily enter and perform assigned work.
- b. Has limited or restricted means for entry or exit. Confined-space Openings may be small in size and may be difficult to move through easily. However, in some cases openings may be very large; for example, open-topped spaces such as pits or excavations. Entrance and exit may be required from top, bottom, or side. Size or location may make rescue efforts difficult.
- c. Is not designed for continuous employee occupancy
- d. Most confined spaces are not designed for employees to enter and work on a routine basis. They may be designed to store a product, enclose materials and process, or transport products or substances. Therefore, occasional employee entry for inspection, maintenance, repair, cleanup, or similar tasks, is often difficult and dangerous. The danger associated with entry may come from chemical or physical hazards within the space.

I. Non-Permit Confined Space means a confined space that does not contain, nor has the potential to contain, any hazard capable of causing death or serious physical harm (with respect to atmospheric hazards).

J. Permit-Required Confined Space (permit space) means a confined space that has one or more of the following characteristics:

- a. Contains or has a potential to contain a hazardous atmosphere
- b. Contains a material that has the potential for engulfing an entrant
- c. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly-converging walls or by a floor that slopes downward and tapers to a smaller cross-section; or
- d. Contains any other recognized serious safety or health hazard.

K. Other “Confined Space” - Based on the definition many types of spaces may be considered “confined,” and therefore, hazardous. Some examples of confined spaces might be sewers, electrical vaults, steam tunnels, mechanical rooms, or other types of enclosures.

L. It is the responsibility of Department Heads to evaluate potentially hazardous spaces within facilities or area under their control and ensure that the proper precautions are taken for safety.

- a. This responsibility may be delegated to a competent person within the department provided he/she is qualified.
- b. It may be determined that a space presents no real danger for employees. However, until the space has been evaluated and tested, it shall be assumed to be confined and potentially dangerous.
- c. Once a space has been evaluated and it has been determined that confined space characteristics are present, the Department Head or their designee shall determine if the Confined Space requires a permit and will apply appropriate labeling.

M. Identifying Confined Space Hazards

- a. Once a space has been identified as confined, the hazards that may be present within the confined space must be identified. Confined-space hazards can be grouped into the following categories:

N. Oxygen-deficient atmospheres

- a. The normal atmosphere is composed of approximately 21% oxygen and 79% nitrogen. Atmosphere containing less than 19.5% oxygen shall be considered oxygen-deficient. The oxygen level inside a confined space may be decreased as the result of either consumption or displacement.
- b. There are a number of processes that consume oxygen in a confined space. Oxygen is consumed during combustion of flammable materials, as in welding, cutting, or brazing. A more subtle consumption of oxygen occurs during bacterial action, as in the fermentation process. Oxygen can also be consumed during chemical reactions such as in the formation of rust on the exposed surfaces of a confined space. The number of people working in a confined space and the amount of physical activity can also influence oxygen consumption. Oxygen levels can also be reduced as the result of oxygen displacement by other gases.

O. Flammable atmospheres

- a. Flammable atmospheres are generally the result of flammable gases, vapors, dust mixed in certain concentrations with air, or an oxygen-enriched atmosphere.
- b. Oxygen-enriched atmospheres are those atmospheres that contain an oxygen concentration greater than 22%. An oxygen-enriched atmosphere will cause flammable materials such as clothing and hair to burn violently when ignited.

- c. Combustible gases or vapors can accumulate within a confined space when there is inadequate ventilation. Gases that are heavier than air will accumulate in the lower levels of a confined space. Therefore, it is especially important that atmospheric tests be conducted near the bottom of all confined spaces.
- d. The work being conducted in a confined space can generate a flammable atmosphere. Work such as spray painting, coating or the use of flammable solvents for cleaning can result in formation of an explosive atmosphere. Welding or cutting with oxyacetylene equipment can also be the cause of an explosion in a confined space and shall not be allowed without a hot work permit. Oxygen and acetylene hoses may have small leaks in them, which could generate an explosive atmosphere and, therefore, should be removed when not in use. The atmosphere shall be tested continuously while any hot work is being conducted within the confined.

P. Toxic atmospheres

- a. Toxic atmospheres may be present within a confined space as the result of one or more of the following:
 - i. The Product Stored in the Confined Space
 - ii. When a product is stored in a confined space, the product can be absorbed by the walls and give off toxic vapors when removed or when cleaning the residual material. The product can also produce toxic vapors, which will remain in the atmosphere due to poor ventilation.
 - iii. The Work Being Conducted in the Confined Space Toxic atmospheres can be generated as the result of work being conducted inside the confined space. Examples of such work include Welding or brazing

Q. Mechanical and Physical Hazards

- a. Problems such as rotating or moving mechanical parts or energy sources can create hazards within a confined space. All rotating or moving equipment such as pumps, process lines, electrical sources, etc., within a confined space must be identified.
- b. Physical factors such as heat, cold, noise, vibration, and fatigue can contribute to accidents. These factors must be evaluated for all confined spaces

R. Confined Space Entry Program

- a. All confined spaces located within a facility or under a Department's control should be identified. Once the space has been identified as Confined, the Safety Coordinator shall determine if a permit is required.
- b. All employees shall be made aware of these confined spaces through training or instruction provided by Department Superintendents or their designated representatives. The Safety Coordinator shall provide assistance in this training.

S. Preventing Unauthorized Entry

- a. Department Superintendents or their designated representatives shall instruct all employees that entry into a confined space is prohibited without an authorized permit.
- b. Department Superintendents or their designated representatives shall instruct all employees to list their names on the authorized permit before they will be allowed to enter a confined space.

T. The Permit System

- a. When a confined space must be entered, a permit shall be completed and authorized by department superintendents, Supervisors, or their designated representatives prior to entry of the confined space. This permit shall serve as certification that the space is safe for entry. The permit shall contain the date, the location of the space, and the signature of the person providing the certification.
- b. A permit shall not be authorized until all conditions of the permit have been met.
- c. The permit to be used by City of Kalispell employees can be requested from the Department Superintendent.

U. Planning the Entry

- a. The first step towards conducting a safe confined-space entry is to plan the entry. This will allow for the identification of all hazards, and for the determination of all equipment necessary, to complete the project.

V. Gathering General Data

- a. Identify the confined space. Give the name or location of the confined space.
- b. Give the reason for entering the confined space. Be specific, and identify if hot work will be done.
- c. Identify the contents of the confined space. This refers to any chemicals or other materials and energy that are usually present in the confined space.

W. Identifying the Hazards

- a. NOTE:It is recommended that the entry supervisor prior to the opening of any covers conduct atmospheric tests.
- b. The entry supervisor will determine the oxygen content and describe the testing procedures and equipment used.
- c. The entry supervisor will determine flammable gas content and describe the testing procedures and type analyzer used.

- d. If a toxic substance is determined to be in the confined space during testing by the entry supervisor, The Department Superintendent shall be contacted to assist in obtaining a Material Safety Data Sheet or other chemical information to determine what type of personal protective equipment is required, the potential health effects, the Permissible Exposure Limits, and any other information needed to safely conduct the work.
- e. Department Superintendent or their designated representatives will determine mechanical and physical hazards. They should list all items and energy that will require lock-out/tag-out, blanking and bleeding, disconnecting, or securing. Physical hazards should be listed.

X. Ventilation of Confined Space

- a. Indicate whether mechanical or natural ventilation will be used. Describe the procedures to be used.
- b. NOTE: If mechanical ventilation is to be used, the exhaust must be pointed away from personnel or ignition sources. Also, mechanical ventilators should be bonded to the confined space.

Y. Isolating the Confined Space

- a. Describe the procedures for disconnecting equipment or lock-out/tag-out. All mechanical, electrical, or heat-producing equipment should be disconnected or locked and tagged out. This would also include any pumps that pull fluid from, or pump fluid into, confined space.

Z. Purging/Cleaning the Confined Space

- a. Indicate if the confined space will be purged. Purging with inert gas is not recommended. If the space must be purged, describe the procedures.
- b. Indicate the type of cleaning methods to be used. If chemical cleaners are to be used, name the type and describe the procedures. The MSDS for the chemical should be consulted prior to use.
 - i. NOTE:When introducing a chemical into a confined space, the compatibility of that chemical with the contents of the confined space must be checked. If in doubt, consult the Department Superintendent.
 - ii. NOTE:If steam is to be used, the hose should be bonded to the confined space.

AA. Placement of Warning Signs.

- a. Indicate if warning signs or barriers will be needed to prevent unauthorized entry or to protect workers from external hazards. If the confined space will be left open and unattended for any length of time, warning signs and barriers will be required.

BB. Identifying All Personnel

- a. List all employees that will be required to prepare the confined space and complete the work inside the space.

CC. Identifying Necessary Equipment

- a. List all equipment that will be necessary to complete the project.

DD. Conducting Entry Training

- a. Once the entry has been planned, Department Superintendent or their designated representatives must train all employees who will be involved in the entry. The training should be conducted no earlier than one day before entry is to be made and the following outline should be used for the training:
 - i. Identify the confined space and the reason(s) for entry
 - ii. Identify the work detail
 - iii. Assign each employee the job(s) he/she is to perform in the project (entrant, standby person, etc.)
 - iv. If an employee is required to use a piece of equipment, be sure that he/ she is capable of using the equipment properly
 - v. Inform all personnel that no one is to enter the confined space unless the standby person is present at the work site.

EE. Inform entrants of all known or suspected hazards:

- a. Any access or exit problems
- b. All equipment that must be locked out or tagged out
- c. The contents of the confined space
- d. All atmospheric levels that must be maintained before entering and while working in the confined space. If a toxic atmosphere or substance is present or could become present, the following additional training must be completed:
 - i. If respiratory protection is not going to be used, inform personnel of the maximum permissible exposure level (PEL) that can exist within the confined space, and the method used to monitor.
 - ii. Inform personnel of the potential health effects of exposure to the toxic atmosphere or substance.
 - iii. Inform personnel of the signs and symptoms of exposure to the toxic flume.
 - iv. Inform personnel of the personal protective equipment (PPE) that they will be required to wear.
 - v. If entrants are unaware of the proper use of the PPE, they must be trained in the proper use of this equipment.

- e. Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. A local physician shall determine what health -and-physical-conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).

FF. Identify isolation procedures

- a. Inform the personnel responsible for the lock-out/tag-out of all equipment that must be isolated.
- b. Inform the personnel responsible for performing this function of the methods to be used.

GG. Identify purging and/or ventilation procedures

- a. Inform all personnel responsible for performing this function of the methods to be used.

HH. Identify all equipment needed

- a. Inform personnel involved in the project of all equipment that will be necessary to complete the project.
- b. Make sure that all employees are capable of using their assigned equipment properly.

II. Determine necessary personal protective equipment

- a. Inform personnel of all PPE that must be used to ensure their safety
- b. Make sure that all personnel required to use PPE are trained in the proper use of the equipment.

JJ. Establish communication

- a. Inform all entrants that they are required to maintain communication with the standby person.
- b. Inform standby person that he/she must maintain constant contact with all entrants.
- c. Inform personnel of the type of communication they are to use.

KK. Protect from external hazards

- a. Inform personnel where signs and barriers will be placed to prevent.
- b. Unauthorized entry and protect entrants from external hazards.

LL. Pre-plan rescue procedures

- a. The designated standby person(s) should be informed of the rescue procedures to be followed.
- b. The standby person should be informed that he/she can have no other duty but maintain contact with personnel inside the confined space.
- c. Inform the standby person(s) that they must not enter the confined space under any circumstances.

MM. Place the confined space back into service

- a. Inform personnel of the steps to be taken to place the confined space back into service.

NN. Preparing the Confined Space for Entry

- a. Once the entry has been planned and personnel have been trained, the next step is to prepare the confined space for entry. The following steps are to be followed when preparing the confined space for entry:
 - i. If warning signs or barriers are to be used to prevent unauthorized entry or to protect entrants from external hazards, they should be placed on or around the confined space as planned and discussed in training.
 - ii. Place all tools, safety equipment, monitoring equipment, etc., near the confined space.
 - iii. Isolate all mechanical and/or electrical hazards as planned and discussed in training.
 - iv. Purge / ventilate the confined space as planned and discussed in training.
- b. The entry supervisor will test the atmosphere as discussed in training.
- c. If oxygen content is less than 19.5% or greater 22%, perform additional ventilation. Then, shut off ventilation equipment and re-test the oxygen content.
- d. If oxygen content is between 19.5% and 21.5%, continue entry preparation.
- e. The entry supervisor will test for flammable gas level as planned and discussed in training.
- f. If the meter reading is less than 10% of the lower explosive limit (LEL), continue entry preparations.
- g. If the meter reading is above 10% of the LEL, continue ventilation of the confined space. Shut off the ventilation and have the atmosphere retested.
- h. If the meter reading is still above 10% of the LEL, the confined space must be cleaned before entry is permitted. If the confined space must be entered for cleaning purposes proper ventilation/purging of the atmosphere must be accomplished, then retested before entry.

- i. The entry supervisor will determine the toxicity of the atmosphere as planned and discussed in training. If a toxic atmosphere is present, no person should be permitted to enter the confined space at a level exceeding the Permissible Exposure Limit without proper Personal Protective Equipment. The Department Superintendent should be called to assist in identifying proper precautions and the protective measures to be taken.
- j. Assemble all personnel involved and conduct a simulated rescue drill.
- k. The entry supervisor will then add any needed information, then complete and sign the permit.

OO. Utilizing Safety Equipment

- a. Where practical, all personnel entering a confined space should be equipped with a retrieval line secured at one end to the entrant by a full-body harness with its other end secured on a tripod lifting hoist.

PP. Atmospheric Testing Procedures

- a. All testing equipment shall be calibrated as instructed by the manufacturer
- b. All of the manufacturer's operating instructions must followed
- c. The test equipment should be tested in a known atmosphere to insure its accuracy
- d. Ventilation equipment must be shut off before conducting any atmospheric tests
- e. The atmosphere must be tested at the bottom, top, and middle of all confirmed spaces
- f. The atmosphere must be continuously monitored while work is being conducted in the confined space
- g. If the confined space is left for any reason, the atmosphere must be re-tested before re-entering the space

QQ. Confined Space Cleaning Procedures

- a. If cleaning must be conducted in a confined space to achieve acceptable atmospheric conditions, the following procedures must be followed:
 - i. All entrants must be equipped with designated safety equipment
 - ii. All entrants must be equipped with an SCBA
 - iii. No spark-producing tools will be allowed for use

RR. Rescue Procedures

- a. In the event of an emergency, the standby person should:
 - i. The standby person(s) is not to enter the confined space for any reason!
 - ii. Immediately summon the City of Kalispell Fire Department by radio or telephone (Dial 911).
 - iii. Attempt to remove the victim by use of the retrieval line from outside the confined space if this can be accomplished without creating further hazard for the entrant or the attendant
 - iv. If the standby person is able to remove the victim with the retrieval line, he/she should administer aid within the limits of his/her training until emergency medical services arrive
 - v. If the standby person is unable to remove the victim by using the retrieval line, he or she must wait for help to arrive.
 - vi. Give EMS / Rescue personnel any information they request

SS. Personnel Responsibilities & Training

- a. Everyone involved in a confined-space entry project has certain responsibilities and requires a certain amount of training. It is very important that every individual is familiar with their responsibilities. This section outlines the responsibilities and training requirements of each individual involved in a project.

TT. Responsibilities of the Safety Coordinator or his/her designee

- a. Review and update the City of Kalispell Confined Space Program
- b. Insure compliance with standards set forth in the program by periodic inspection of entry sites and canceling permits where unsafe conditions are present
- c. Assisting Department Superintendent/Supervisors with:
 - i. Training as set forth in the program
 - ii. Identification of confined spaces
 - iii. Identifying spaces that require a permit for entry
 - iv. Labeling Permit-Required Confined Spaces
 - v. Perform a single annual review covering all entries performed during a 12-month period to ensure employees participating in entry operations are protected from permit space hazards.

UU. Responsibilities and Training Requirements of Department Superintendents or their Designated Representatives

- a. Identifying confined spaces within facilities or areas under their control
- b. Identifying hazards within a confined space under their control
- c. Documenting that all training requirements for a specific confined space entry have been met by signing the pre-entry authorization space on the permit
- d. Insuring that the required atmospheric tests are performed at the confined space and results recorded on the permit prior to entry authorization

- e. Obtaining and maintaining all equipment necessary to complete the confined-space entry project
- f. Authorize entry by signing the Entry Authorization space on the entry permit after all conditions for a safe entry have been met
- g. Terminating the entry and canceling the permit when:
 - i. Entry operations covered by the entry permit have been completed
 - ii. Condition that is not allowed under the entry permit arises in or near the permit space
 - iii. When the responsibility for the permit space entry operations is transferred to another entity.

VV. Responsibilities and Training Requirements of Authorized Entrants

- a. The person(s) authorized to enter a confined space shall be responsible for and receive training in the following:
 - i. The knowledge of hazards that may be faced during entry, including the mode
 - ii. Signs, or symptoms and consequences of the exposure
 - iii. Proper use of equipment, which includes:
 - 1. Atmospheric testing and monitoring equipment
 - 2. Ventilating equipment needed to obtain acceptable entry conditions
 - 3. Communication equipment necessary to maintain contact with the standby person
 - 4. Personal protective equipment as needed
 - 5. Lighting equipment as needed
 - 6. Barriers and shields as needed
 - 7. Equipment, such as ladders, needed for safe ingress and egress
 - 8. Rescue and emergency equipment as needed
 - 9. Any other equipment necessary for safe entry into and rescue from permit spaces
 - iv. Communications with the attendant, as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space if required.
- b. Alert the attendant (standby person) whenever:
 - i. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
 - ii. The entrant detects a prohibited condition
- c. Exiting the permit space as quickly as possible whenever:
 - i. An order to evacuate has been given by the attendant or the entry supervisor

- ii. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
- iii. The entrant detects a prohibited condition
- iv. An evacuation alarm is activated

WW. Responsibilities and Training Requirements of Standby Persons (Attendants)

- a. Persons authorized to perform duties as attendant shall be responsible for and receive training in the following:
 - i. Knowing the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of exposure
 - ii. Is aware of possible behavioral effects of hazard exposure in authorized entrants
 - iii. Continuously maintaining an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants accurately identifies who is in the permit space
 - iv. Remains outside the permit space during entry operations until relieved by another attendant
 - v. Attempting non-entry rescue if proper equipment is in place and the rescue attempt will not present further hazards to the entrant or attendant
 - vi. Communicating with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space when conditions warrant
 - vii. Monitoring activities inside and outside the space to determine if it is safe for entrants to remain in the space and ordering the authorized entrants to evacuate the permit space immediately under any of the following conditions:
 - 1. If the attendant detects a prohibited condition
 - 2. If the attendant detects the behavioral effects of hazard exposure in authorized entrant
 - 3. If the attendant detects a situation outside the space that could endanger the authorized entrants
 - 4. If the attendant cannot effectively and safely perform all the duties required by this program
 - 5. Summoning rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from the permit space hazards
 - viii. Taking the following actions when unauthorized persons approach or enter a permit space while entry is underway:
 - 1. Warn the unauthorized persons that they must stay away from the permit space
 - 2. Advise the unauthorized persons that they must exit immediately if they have entered the permit space
 - 3. Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space
 - 4. Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants

XX. Signs & Symptoms - Potential Effects of Oxygen-Deficient Atmospheres

Oxygen Content Effects and Symptoms

19.5%	* Minimum permissible level
15 - 19%	* Decreased ability to work strenuously. Impaired coordination and possible coronary, pulmonary or circulatory problems.
12 - 14%	* Respiration and pulse increases in exertion. Impaired coordination, perception and judgement.
10 - 12%	* Respiration further increases. Poor judgement, blue lips.
8 - 10%	* Mental fatigue, fainting, nausea, unconsciousness, ashen face, blue lips and vomiting.
6 - 8%	* Six minutes--50% fatal; eight minutes--100% fatal; 4-5% recovery with treatment.
4 - 6%	* Coma in 40 seconds, convulsion, death.

Potential Effects of Carbon Monoxide Exposure

<u>PPM</u>	<u>Effects & Symptoms</u>	<u>Time</u>
35	Permissible exposure	8 hrs.
200	Slight headache, discomfort	3 hrs.
400	Headache, discomfort	2 hrs.
600	Headache, discomfort	1 hr.
1000	Confusion, nausea, headache	2 hrs.
1000	Slight heart palpitation	½ hr.
2000	Unconsciousness	½ hr.
2500	Fatal	<1 hr.

CARBON MONOXIDE IS AN ODORLESS, COLORLESS GAS THAT IS HEAVIER THAN AIR AND CAN BUILD UP IN A CONFINED SPACE.

City of Kalispell

Facility Security Policy

A. Purpose

- a. To establish minimum security requirements for all City facilities.

B. Policy

- a. All reasonable precautions will be taken to keep unauthorized people from entering City operated facilities.
- b. All buildings and outdoor equipment not monitored on a 24 hour per day basis will be kept locked while unattended.
- c. Damage to security gates, fences, signs, locks, etc. shall be repaired promptly.

C. Procedures

- a. Facilities that are fenced must be inspected monthly to verify, that the fencing, security gates, warning signs, etc. are intact and functioning as intended.
- b. All main gates to restricted facilities must be posted with a warning sign and a placard indicating who to call in an emergency.
- c. Whenever there is an indication of an attempted break in, vandalism, stolen warning signs, etc., the matter shall be reported immediately to the police and to the Department Superintendent.

City of Kalispell

Hazard Communication Standard

A. Policy

- a. The City of Kalispell will use as a guide, the Federal OSHA Standards, 29 CFR 1910 and 1926. WWW.OSHA.GOV

B. Hazard Communication Standard - Employee Right-to-Know

- a. Employees of the City of Kalispell have the right to know the properties and potential safety and health hazards of substances to which they may be exposed. Such knowledge is essential to reducing the risk of occupational illness and injury.

C. Goal of Right to Know:

- a. To help you reduce the risks involved in working with hazardous materials
- b. To transmit vital information to employees about real and potential hazards of substances in the work place
- c. To reduce the incidence and cost of illness and injury resulting from hazardous substances
- d. To promote public employee's need and right to know
- e. To encourage a reduction in the volume and toxicity of hazardous substances

D. Hazardous Substance

- a. A hazardous substance is any substance that is a physical or health hazard.

E. "Health Hazard" means any chemical or biological substance or agent which is listed in the U.S. Occupational Safety and Health Administration's list of Toxic and Hazardous Substance 29 CFR Part 1910 and;

- a. any other substance including but not limited to chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, and;
- b. agents which damage the lungs, skin, eyes or mucous membranes, and;
- c. any substance for which a Material Safety Data Sheet has been provided by the manufacturer, as a hazardous material, or such substances deemed by the Commissioner, based on documented scientific evidence, that poses a threat to the health of an employee.

F. "Physical Hazard" means a chemical which is a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water - reactive, and;

- a. which is contained in the U.S. Occupational Safety and Health Administration's list of Hazardous Materials, 29 CFR Part 1910 and;
- b. any substance for which a Material Safety Data Sheet has been provided by the manufacturer as a hazardous material, or such substances deemed by the

Commissioner, based on documented scientific evidence that it poses a threat to the safety of an employee.

G. Identifying Hazardous Substances

- a. Every container of hazardous substances must bear a label showing the chemical name and the Chemical Abstract Service number (CAS #) or the manufacturer's label. In addition, many containers will have pictorial labels suggesting the protective measures required in handling the substance.
- b. Other labels and placards will utilize a numbering system of 0-4 to determine the seriousness or the hazard of the substance in the three categories of Health, Flammability, and Reactivity. In all cases, a 0 means the least threat while a rating of 4 means the greatest danger

H. How to Determine which Substances Are in Your Place

- a. Discuss this topic with your supervisor and review your department's MSDS sheets. To determine the extent of the hazard for a substance or protective measures required in using a chemical, locate the Material Safety Data Sheets (MSDS). The MSDS will provide an in-depth analysis of the substance along with all precautions necessary to handle the substance safely.

I. Material Safety Data Sheets (MSDS)

- a. It is very important to know how to read and understand the MSDS. It is designed and written in sections:
 - i. Section I - Product Identification - (Chemical Name and Trade Names)
 - ii. Section II - Hazardous Ingredients - (Components and Percentages)
 - iii. Section III - Physical Data - (Boiling point, density, solubility in water, appearance, and color, etc.)
 - iv. Section IV- Fire and Explosion Data - (Flash point, extinguisher media, special fire fighting procedures, and unusual fire and explosion hazards)
 - v. Section V - Reactivity Data - (Stability, condition to avoid, incompatible materials, etc)
 - vi. Section VI - Health Hazard Data - (Exposure limits, effects of overexposure, emergency and first aid procedure)
 - vii. Section VII - Spill or Leak Procedures - (Steps to take to control and clean up spills and leaks and waste disposal methods)
 - viii. Section VIII - Control Measures - (Respiratory protection, ventilation, protection for eyes or skin or other protective equipment)
 - ix. Section IX - Special Precautions - (How to handle and store, steps to take in a spill, disposal method, and other precautions)

J. Appropriate Work Practices

- a. It is strongly suggested that you read the MSDS for every substance you come in contact with and utilize the control measures (protective measures) and the special precautions delineated on the MSDS. When in doubt, consult with your supervisor.

K. Emergency Procedures

- a. Report all spills and avoid contact with substances without proper protective equipment.
- b. If you are exposed to a hazardous substance that requires protective equipment when you do not have the required protective equipment seek medical attention and make a written report of the exposure with your supervisor. The record of the exposure will be kept permanently and will be available to you.

L. Emergency 911

- a. To report emergencies, dial 911. The 911 number will provide access to fire, police, ambulance, or emergency services or use your portable radio, if applicable.

M. Acronyms You May Wish to Become Familiar With:

OSHA- Occupational Safety & Health Act

EPA - Environmental Protection Agency

NRC - National Response Center (Coast Guard)

DOT - Department of Transportation

NIOSH - National Institute of Safety and Health

MSHA - Mine Safety & Health Act

TSCA - Toxic Substance Control Act

CFR - Code of Federal Regulations

CAS - Chemical Abstract Service (number)

TLV - Threshold Limit Value

TWA - Time Weighted Averaged

PEL - Personal Exposure Limit

UEL - Upper Explosion Limit

La - Lower Explosion Limit

PPE - Personal Protection Equipment

P1'S - Parts Per Million

Mg/l - Milligrams per Liter

ACGIH - American Conference of Governmental Industrial Hygienist

SARA - Superfund Amendments Re-authorization Act

- N. Material Safety Data Sheets (MSDS) are the key sources to determine which substances are in the work place and how to avoid exposure to hazardous substances. MSDS's are available at your request from your supervisor. Learn where the Material Safety Data Sheets are kept and review them frequently.
- O. MSDS Sheets must be reviewed and updated annually and only those MSDS sheets for chemicals currently in use placed in the active binder within the respective department.
- P. Outdated MSDS sheets are to be retained and stored separately, in a secure place within the respective department for a minimum of forty (40) years.

City of Kalispell

Lock-Out/Tag-Out Policy

A. Scope

- a. This program specifically outlines the purpose, authorization, rules, and techniques to be utilized by City of Kalispell employees on a daily basis to guard against unexpected energizing, start-up, or release of stored energy, which could cause injury. It shall be the duty of each employee to become familiar with the contents of this program and ensure compliance with its procedures. Department Superintendents and Supervisors shall ensure that employees under their supervision receive training in the contents of this program and ensure records of this training are maintained.

B. Purpose

- a. The purpose of this program is to establish procedures for affixing appropriate lockout or tag-out devices to energy-isolating devices, and to otherwise disable machines or equipment to prevent unexpected energizing, start-up, or release of stored energy in order to prevent injury to employees.

C. Definitions Applicable to this Program

- a. **Affected Employee:** An employee whose job requires them to operate or use a machine or piece of equipment on which servicing is being performed under lock-out or tag-out, or whose job requires them to work in an area in which such servicing or maintenance is being performed.
- b. **Authorized Employee:** A person who locks or implements a tag-out system procedure on machines or equipment to perform the servicing or maintenance on that machine or equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or piece of equipment, which must be locked, or a tag-out system implemented. **Energy Source:** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- c. **Lock-Out:** The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed. **Lock-Out Device:** A device that utilizes a positive means, such as a lock, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or piece of equipment.
- d. **Normal Production Operations:** The utilization of a machine or piece of equipment to perform its intended production function.
- e. **Primary Authorized Employee:** The authorized employee who has been vested with responsibility for a set number or group of employees performing service or maintenance on machines or equipment subject to Lock-out or tag-out procedures.

- f. **Servicing and/or Maintenance:** Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-jamming of machines or equipment, and making adjustments or tool changes where the employee may be exposed to the unexpected energizing or start-up of the equipment or release of hazardous energy.
- g. **Tag-Out:** The placement of a tag-out device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tag-out device is removed.

D. Authorization

- a. A designated City of Kalispell representative may authorize the use of this program by all facilities, departments, and individuals associated with the control of hazardous energy on any City of Kalispell entity.
- b. Department Superintendents and / Supervisors will implement the program and insure that the personnel under their supervision are trained in accordance with the procedures established herein. This responsibility may be delegated to another person or persons within the department providing it is done so in writing and the designated person is qualified and competent. This person will authorize employees to implement the locking and tagging system procedure.
- c. An employee who has been authorized by his or her department Superintendent or supervisor shall lock or implement a tag-out system procedure on machines or equipment to perform servicing or maintenance; or on a machine which the unexpected energizing or start-up of the machine or equipment, or release of stored energy could cause injury.

E. Rules

- a. Each department utilizing the City of Kalispell program for the control of hazardous energy shall establish and document site-specific procedures for energy isolation. Specialized lock-out devices shall be obtained and kept within the department for its use.
- b. A standard supply of the most-often-used lock-out devices shall be maintained.
- c. If an energy-isolating device is capable of being locked out, the authorized employee shall utilize lock-out, unless the Department Superintendent or Supervisor can demonstrate utilization of a tag-out system providing full employee protection. When a tag-out device is used for energy-isolating, which is capable of being locked out, the tag-out device shall be attached at the same location the lockout device would have been attached.
- d. Lock-out devices used for the implementation of this program shall be accompanied by a standard lockout tag. These devices shall be used for no other purpose than lock-out, and shall be substantial enough to prevent removal without the use of excessive force or unusual techniques. Tag-out devices, including their

means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tag-out device attachment means shall be of a non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

- e. The Safety Coordinator or his/her designated representative shall conduct periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of 29 CFR 1910 are being followed.
- f. Department Superintendents or their designated representatives are required to provide training to ensure the purpose and function of the energy control program are understood by employees. Through training, employees will be required to possess the knowledge and skills required for safe applications, usage, and removal of energy controls. Training shall include the following:
 - i. Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
 - ii. Each affected employee shall be instructed in the purpose and use of the energy control procedure.
 - iii. All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked-out or tagged-out.
 - iv. When tag-out systems are used, employees shall also be trained in the following limitations of tags:
- g. Tags are essentially warning devices affixed to energy-isolating devices, and do not provide the physical restraint on those devices that is provided by lock-out.
- h. When a tag is attached to an energy-isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored or otherwise defeated.
- i. Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
- j. Tags and their means of attachment must be made of materials that will withstand the environmental conditions encountered in the workplace.
- k. Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- l. Tags must be securely attached to energy-isolating devices so that they cannot be inadvertently or accidentally detached during use.

- m. Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or process that presents a new hazard, or when there is a change in energy control procedures. Retraining shall establish employee proficiency and introduce new or revised control methods and procedures as necessary.
- n. The Superintendents of departments or their designated representatives shall certify that employees training has been accomplished and is being kept up-to-date. The certification shall contain each employee's name and dates of training.

F. Techniques

- a. Only authorized employees shall perform implementation of the lock-out or tag-out system.
- b. The established procedure for the application of energy control shall cover the following elements and actions and shall be done in the following sequence:

G. Preparation for shutdown:

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

H. Machine or equipment shutdown:

- a. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of equipment de-energizing.

I. Machine or equipment isolation:

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

J. Lock-out or tag-out device application:

- a. Authorized employees shall affix Lock-out or tag-out devices to each energy-isolating device. Lock-out devices, where used, shall be affixed in a manner that will hold the energy in a "safe" or "off" position. Tag-out devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy-isolating devices from the "safe" or "off" position is prohibited.

K. Where tag-out devices are used with energy-isolating devices designed with the capability of being locked:

- a. The tag shall be fastened at the same point at which the lock would have been attached.

L. Where a tag cannot be affixed directly to the energy-isolating device;

- a. The tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

M. Stored Energy:

- a. Following the application of lock-out or tag-out devices to energy-isolating devices, all potentially hazardous stored energy shall be rendered safe. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

N. Verification of Isolation:

- a. Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energizing of the machine or equipment has been accomplished.

O. Release from Lock-out or Tag-out:

- a. Before lock-out or tag-out devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:
 - i. The Machine or Equipment: the work area shall be inspected to ensure that nonessential items have been removed and that machine or equipment components are operationally intact.
 - ii. Employees: The work area shall be checked to ensure that all employees have been safely positioned or removed. Before lock-out or tag-out devices are removed and before machines or equipment are energized, affected employees shall be notified.

P. Lock-out or Tag-out Device Removal:

- a. Each lock-out or tag-out device shall be removed from each energy-isolating device by the employee who applied the device.
- b. **Exception:** When the authorized employee who applied the lock-out or tag-out device (installer) is not available to remove it, that device may be removed under the direction of the installer's immediate supervisor. Each department involved in lock-out or tag-out operations shall provide specific training and procedures for such removal. The procedures and training shall be documented and the specific procedure shall include at least the following elements:
- c. Verification by the immediate supervisor that the employee who applied the device is not at the facility and;
- d. making all reasonable efforts to contact the authorized employee to inform them that his/her lock-out or tag-out device has been removed, and;
- e. ensuring that the authorized employee has this knowledge before they resume work at the facility.

Q. Testing or Positioning of machines, equipment, or components thereof:

- a. In situations where lock-out or tag-out devices must be temporarily removed from the energy-isolating device and the machine or equipment energized to test or position the equipment or component thereof the following sequence of actions shall be followed:
 - i. Clear the machine or equipment of tools and materials
 - ii. Remove employees from the machine or equipment area
 - iii. Remove the lock-out or tag-out devices
 - iv. Energize and proceed with testing or positioning
 - v. Re-energize all systems and reapply energy control measures to continue the servicing and/or maintenance.

R. Group Lock-out or Tag-out:

- a. When servicing and/or maintenance is performed by a crew or department, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lock-out or tag-out device This shall be accomplished by:
- b. The application of a multi-lock accepting device by the primary authorized employee to the energy-isolating device.
- c. The primary authorized employee attaching his/her lock to the multi-accepting device.
- d. Each authorized employee shall affix a personal lockout or tag-out device to the multi-lock accepting device when the begin work, and shall remove those devices when they stop working on the machines or equipment being serviced or maintained.
- e. The primary authorized employee removing his/her lock and the multi-lock accepting device when all service or maintenance has been complete.

S. Shift or Personnel Changes:

- a. To insure the orderly transfer of lock-out or tag-out devices between off-going and on-coming employees and minimize exposure to hazards from unexpected energizing start-up of the machine or equipment, or release of stored energy, these procedures shall be followed:
- b. The on-coming personnel shall notify the off-going personnel that they are ready to begin work on the machine or equipment.
- c. All lock-out and/or tag-out devices attached to the machine or equipment by the off-going personnel shall be removed and immediately replaced with like devices by the on-coming authorized personnel.
- d. The primary authorized employee shall insure that all pertinent coordination between off-going and oncoming personnel has been completed before the formal transfer of their personal lock-out and tag out device.

City of Kalispell

Worksite & Office Safety Policy

A. Purpose

- a. The purpose of this program is to provide guidance to directors, supervisors and employees on general safety practices. Both worksites, inside and out, can present potential health and safety hazards. This includes, but is not limited to: Slips, trips, falls, electrical/mechanical hazards, noise, temperature extremes, humidity, confined spaces, being struck by or striking objects, workplace violence.

B. Responsibilities

- a. Management – Provide training for all their employees on proper safety practices to include, but not limited too:
 - i. Emergency procedures
 - ii. Electrical/mechanical Safety
 - iii. Ergonomics
 - iv. Ensure equipment is in safe working order
 - v. Proper storage for supplies & housekeeping
 - vi. Hazard Communication & Employee Right-to-Know
 - vii. Lockout/Tagout
 - viii. Hearing and Respiratory protection
 - ix. Proper reporting of injuries, illnesses, property damage, and “near misses”
- b. Employees:
 - i. Be conscientious as to your work environment and the hazards you may encounter
 - ii. Learn and always perform safe work practices
 - iii. Report unsafe conditions, injuries, illnesses, property damage, and “near misses” immediately to your supervisor

C. Slips, Trips, and Falls

- a. The following checklist can help stop a fall before it happens.
 - i. Be sure pathway and work areas are clear before you walk.
 - ii. Close drawers and cabinets completely after every use.
 - iii. Always use a stepladder for overhead reaching. Chairs should never be used as ladders.
 - iv. Clean up spills immediately.
 - v. Pick up objects co-workers may have left on the floor.
 - vi. Report loose carpeting or damaged flooring.
 - vii. Never carry anything that obscures your vision.
 - viii. Wear stable shoes with non-slip soles.
 - ix. If you find yourself heading for a fall, remember - roll, don't reach. By letting your body crumple and roll you are more likely to absorb the impact and momentum of a fall without injury. Reaching an arm or leg out to break your fall may result in a broken limb instead.

D. Strains and Overexertion

- a. It's important to follow the principles of safe lifting. Even small, light loads (i.e. stacks of files or boxes) can wreak havoc on your back, neck, and shoulders if you use your body incorrectly. Backs are especially vulnerable. Most back injuries result from improper lifting. If you feel the lift is beyond your ability, contact your supervisor or ask another employee to assist you. Before you pick up an object, ask yourself these questions:
 - i. Is this too heavy for me to lift and carry alone?
 - ii. How high do I have to lift it?
 - iii. How far do I have to carry it?
 - iv. Am I trying to impress anyone by lifting this?

E. Safe Lifting Steps:

- a. Take a balanced stance; feet placed shoulder-width apart. When lifting something from the floor, squat close to the load.
- b. Keep your back in its neutral or straight position. Tuck in your chin so your head and neck continue the straight back line.
- c. Grip the object with your whole hand. Draw the object close to you holding your elbows close to your body to keep the load and your body weight centered.
- d. Lift by straightening your legs. Let your leg muscles, not your back muscles, do the work.
- e. Tighten your stomach muscles to help support your back. Maintain your neutral back position as you lift.
- f. Never twist when lifting. When you must turn with a load, turn your whole body, feet first.
- g. Never carry a load that blocks your vision.
- h. To set something down use the same body mechanics designed for lifting.

F. Lifting from a Seated Position

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

G. Ergonomic Solutions to Backbreaking Tasks

- a. If you are doing a lot of twisting while lifting, try to rearrange the space to avoid this. People who have to twist under a load are more likely to suffer back injury.
- b. Rotate through tasks so periods of standing alternate with moving or sitting. Ask for stools or footrests for stationary jobs.
- c. Store materials at knee level whenever possible instead of on the floor. Make shelves shallower (12-18").
- d. If you must carry a heavy object some distance, consider storing it closer. Request a table to rest it on, or try to use a hand truck or cart to transport it.

- e. Lifting weights in excess of fifty (50) pounds should normally not be attempted alone – Work in teams, and use assistive devices to limit lifts per employee to fifty (50) pounds or less.

H. Struck By or Striking Objects

- a. Pay attention to where you are walking, working and driving at all times. Do not allow yourself to become distracted.

I. Caught In or Between Objects

- a. Workers may be injured as a result of:
 - i. Body extremities (fingers, hands, arms, legs) can be caught in machinery, drawers, and doors.
 - 1. Always keep your extremities away from pinch points.
 - ii. Fingers, hair, or articles of clothing and jewelry caught in machines.
 - 1. Never wear loose clothing around moving equipment.
 - 2. Long hair should be pulled back, tucked inside clothing or be under a hat.
 - iii. While working on equipment, concentrate on what you are doing.

J. Material Storage

- a. Materials that are improperly stored can lead to objects falling on workers, poor visibility, and create a fire hazard. A good housekeeping program will reduce or eliminate hazards associated with improper storage of materials. Examples of improper storage include: disorderly piling, piling materials too high, and obstructing doors, aisles, and fire exits and fire-fighting equipment.
- b. Good storage practices:
 - i. Boxes, papers, and other materials should not be stored on top of lockers or file cabinets because they can cause a landslide of problems. Boxes and cartons should all be of uniform size in any pile or stack. Always stack material in such a way that it will not fall over.
 - ii. Store heavy objects on lower shelves.
 - iii. Try to store materials inside cabinets, files, and lockers.
 - iv. Equipment should not be placed on the edges of a desk, filing cabinet, or table.
 - v. Aisles, corners, and passageways must remain unobstructed.
 - vi. Storage areas should be designated and used only for that purpose.
 - vii. Store heavy materials so you do not have to reach across something to retrieve them.
 - viii. Fire equipment, extinguishers, fire door exits, and sprinkler heads should remain unobstructed. Materials should be at least 18 inches minimum away from sprinkler heads.

K. Reducing Noise Hazards

- a. The following measures are useful for reducing the level of noise or its effects:
 - i. Select quiet equipment if possible. When there is a choice between two or more products, sound levels should be included as a consideration for purchase and use.
 - ii. Provide proper maintenance of equipment, such as lubrication and tightening of loose parts.
 - iii. Locate loud equipment in areas where its effects are less detrimental.
 - iv. Use barrier walls or dividers to isolate noise sources. Use of buffers or acoustically treated materials can absorb noise that might otherwise travel further. Rubber pads to insulate vibrating equipment can also help to reduce noise.
 - v. When possible, schedule noisy tasks at times when it will have less effect on other tasks in work area..

L. Electrical safety

- a. Electric cords should be examined on a routine basis for fraying and exposed wiring. Particular attention should be paid to connections behind furniture.
- b. Electrical appliances must be designed and used in accordance with UL requirements.
- c. Extension cords shall only be used in situations where fixed wiring is not feasible.
- d. Extension cords shall be kept in good repair and free from defects in their insulation.
- e. Extension cords shall be placed where they do not present a tripping or slipping hazard.
- f. Extension cords shall not be placed through doorways having doors that can be closed, and thereby damage the cord.
- g. All extension cords shall be of the grounding type (three conductors).

M. Housekeeping

- a. Good housekeeping is an important element of accident prevention in the work area.
- b. Poor housekeeping may lead to fires, injuries to personnel, or unhealthful working conditions. Mishaps caused by dropping heavy cartons and other related equipment and supplies could also be a source of serious injury to personnel.
- c. Passageways should be free and clear of obstructions. Proper layout, spacing, and arrangement of equipment, furniture, and machinery are essential.
- d. All aisles within the work area should be clearly defined and kept free of obstructions.
- e. Working with damaged equipment can be especially hazardous and should be repaired, replaced or taken out of services.

- f. Cabinet drawers should always be kept closed when not in use. Heavy equipment and large files should be placed in the bottom file drawers.
- g. Materials stored within supply rooms must be neatly stacked and readily reached by adequate aisles. Care should be taken to stack materials so they will not topple over. Under no circumstances will materials be stacked within 18 inches of ceiling fire sprinkler heads or Halon nozzles. Materials shall not be stored so they project into aisles or passageways in a manner that could cause persons to trip or could hinder emergency evacuation.
- h. Through a program of scheduled inspections, unsafe conditions can be recognized and corrected before they lead to serious injuries. Take a few moments each day to walk through your work area. Look for items previously pointed out, such as objects protruding into walkways, file cabinets that are weighted toward the top, or frayed electrical cords. Advise personnel in the area of the hazards and set about correcting them.

N. Computer Work Stations

- a. Complaints concerning musculoskeletal problems are frequently heard from computer operators. Most common are complaints relating to the neck, shoulders, and back. Others concern the arms and hands and occasionally the legs.
- b. Certain common characteristics of Video Display Terminal (VDT) jobs have been identified and associated with increased risk of musculoskeletal problems. These include:
 - i. Design of the workstation
 - ii. Nature of task
 - iii. Repetitiveness of the job
 - iv. Degree of postural constraint
 - v. Work pace
 - vi. Work/rest schedules
 - vii. Personal attributes of individual workers
- c. The key to comfort is in maintaining the body in a relaxed, natural position. The ideal work position is to have the arms hanging relaxed from the shoulders. If the keyboard is used, arms should be bent at right angles at the elbow, with the hands held in a straight line with forearms and elbows close to the body. The head should be in line with the body and slightly forward.
- d. When work is conducted at a computer, the top of the display screen should be at, or just slightly below, eye level. This allows the eye to view the screen at a comfortable level without having to tilt the head or move the back muscles.
- e. Control glare at the source whenever possible. Place VDT's so that they are parallel to direct sources of light such as windows and overhead lights. Use window treatments if necessary. When glare sources cannot be removed, seek appropriate screen treatments such as glare filters. Keep the screen clean.

O. Your Chair

- a. The chair is usually the most important piece of furniture that affects user comfort in an office. The chair should be adjusted for comfort, making sure the back is supported and the seat pan is at a height so the thighs are horizontal and feet are flat on the floor. An ergonomically sound chair requires four degrees of freedom - seat pan tilt, backrest angle, seat height, and backrest height. Operators can then vary the chair adjustments according to the task. In general, chairs with the most easily adjustable dimensions permit the most flexibility to support people's preferred sitting postures.
- b. Armrests on chairs are recommended for most office work except where they interfere with the task. Resting arms on armrests is a very effective way to reduce arm discomforts. Armrests should be sufficiently short and low to allow workers to get close enough to their work surfaces, especially for tasks that require fixed arm postures above the work surface.

P. Working Height

- a. The work surface height should fit the task. The principle is to place the surface height where the work may be performed in such a manner as to keep arms low and close to the body in relation to the task.
 - i. If the working height is too high, the shoulders or the upper arms have to be lifted to compensate, which may lead to pain symptoms and cramps of the neck and shoulders.
 - ii. If, working height is too low, the back must be excessively bowed which may cause backache.
 - iii. Generally, work should be done at about elbow height, whether sitting or standing.

Q. Lighting

- a. Different tasks require different levels of lighting. Areas in which intricate work is performed for example, require greater illumination than warehouses. Lighting needs vary from time to time and person to person as well. One approach is to use adjustable task lighting that can provide needed illumination without increasing general lighting.
- b. Task lamps are very effective to supplement the general office light levels for those who require or prefer additional light. Some task lamps permit several light levels. Since task lamps are controlled by the individual, they can accommodate personal preferences.

R. Indoor Air Quality

- a. Indoor Air Quality (IAQ) is an increasingly important issue in the work environment. The study of indoor air quality and pollutant levels within building environments is a complex problem.

- i. Many of the health symptoms appearing are vague and common both to the office and home environment.
- ii. The following measures should be considered to maintain good air quality:
 - 1. Scheduling regular maintenance of furnace and air filters for heating and cooling systems.
 - 2. Adequate ventilation that could include fixed or portable fans, opening of doors or windows should be performed, especially where fumes from cutting, welding, use of solvents, etc. are utilized.

S. Allergies & Chemically Sensitive Individuals

The number of people who have serious allergies has increased substantially over the past several years and efforts to mitigate exposure to those who are affected should be considered.

a. Fragrance Sensitivity

- i. For many individuals, being exposed to perfumes and chemicals in the workplace can pose a serious health risk. Migraines, nausea and tightening of the throat are common symptoms and people with asthma who are affected by fragrances can suffer respiratory impairment. In addition, people are becoming increasingly sensitive to perfume, cologne and scented hand lotion. However, the sensitivity to fragrances can extend to hair products, candles, potpourri, air fresheners and cleaning supplies used in the workplace.
- ii. Given that chemically sensitive individuals may react to different products with widely varying degrees of severity, it's very difficult to ensure a consistently comfortable and accommodating work environment under every conceivable set of circumstances. Even so, it is the desire of the City of Kalispell to minimize, to the extent possible, the barriers and difficulties experienced in the workplace by employees, visitors and customers subject to chemical/fragrance sensitivities. Therefore, the City of Kalispell recommends that all offices and spaces used by the staff and their visitors remain free of chemical-based scented products."

b. Rubber Latex

- i. Natural rubber latex is known to cause an allergic response in some individuals working in environments in which products composed from this material are extensively used. Latex allergy is particularly associated with the use of powdered latex gloves – the powder helping to disperse the latex protein, resulting in exposures fifty times higher than arises from non-powdered gloves.
- ii. All latex gloves supplied will meet a specification for low levels of free latex protein. The range will include powder-free and powdered types. Non-latex alternatives will also be available.
- iii. Where the nature of the work is such that gloves are frequently removed and replaced, for example as occurs during contact with patients, powder-free or

non-latex types should be used since glove removal liberates latex-carrying powder.

c. Miscellaneous allergies

- i. While there is a myriad of allergies to numerous to mention that individuals are susceptible too, the more prominent ones are; foods, insect stings/bites, and pollens. It is recommended that those individuals who are aware of these potentially life threatening allergies:
 1. Wear or carry with them; identification such as a Medic Alert bracelet, necklace or a wallet card noting the condition(s) and if provided by a physician; medicines in the form of oral or injectible medications, should be close at hand.
 2. It is also recommended, but not required, that they inform co-workers of such condition(s), the symptoms and what to do should they have a reaction.

T. Chemical Safety

- a. Each office employee must be made aware of all hazardous materials they may be in contact within their work area. The Hazard Communication Program includes:
 - i. Written Program
 - ii. Material Safety Data Sheets (MSDS) for each hazardous substance used
 - iii. Specific safe handling, use and disposal
 - iv. Employee training

U. Emergency Preparedness

- a. One result of the recent trend toward open office environments is that smoke from office fires is not contained or isolated as effectively as in less open designs. Open office designs allows smoke to spread quickly and the incorporation of many synthetic and other combustible material in office fixtures (such as furniture, rugs, drapes, plastic wastebaskets, and vinyl covered walls) often creates “smoky” fires. In addition to being smoky, many synthetic materials emit toxic materials during a fire.
- b. For example, cyanide can be emitted from urethane, which is commonly used in upholstery stuffing. Most burning materials can emit carbon monoxide. Inhalation of these toxic materials can severely hamper an office worker’s chances of getting out of a fire in time. This makes it imperative for office workers to recognize the signal to evacuate their work area and know how to exit in an expedient manner.
- c. The local emergency plan will address potential emergencies that can be expected in your work area. For emergency evacuation, the use of floor plans or workplace maps that clearly show the emergency escape routes and safe or refuge areas should be included in the plan. All employees must understand what actions they are to take in the work area and assemble in a safe zone. All new employees should discuss how they should respond to emergencies under plan change. This orientation should include:

1. Identifying the individuals responsible for various aspects of the emergency plan. Confusion will be minimized and employees will have no doubt about who has authority for making decisions.
2. Identifying the method of communication that will be used to alert employees that an evacuation or some other action is required as well as how employees can report emergencies (such as manual pull stations, public address systems, or telephones).
3. Identifying the evacuation routes from the building and locations where employees will gather.

V. General Guidance for Fires and Related Emergencies

a. If you discover a fire or see/smell smoke, immediately follow these procedures:

- i. **Notify the Fire Department or dial 911.**
- ii. Activate the building alarm. If not available or operational, verbally notify people in the building.
- iii. If you can do it safely, isolate the area by closing windows and doors and evacuate the building.
- iv. If possible, shut down equipment in the immediate area.
- v. If possible and if you have received appropriate training, use a portable fire extinguisher to:
 1. Assist oneself to evacuate,
 2. Assist another to evacuate,
 3. Control a small fire
- vi. **Do not collect personal or official items;** leave the area of the fire immediately and walk, do not run to the exit and designated gathering area.
- vii. **Provide the fire/police teams with the details** of the problem upon their arrival. Special hazard information you might know is essential for the safety of the emergency responders.
- viii. **You should not re-enter the building until directed to do so.** Follow any special procedures established for your department.
- ix. If the fire alarms are ringing in your building, you must evacuate the building and stay out until notified to return.
 1. Move to your designated meeting location or upwind from the building staying clear of streets, driveways, sidewalks, and other access ways to the building.
 2. If you are a supervisor, try to account for your employees, keep them together and report any missing persons to the emergency personnel at the scene.

- x. If an individual is overexposed to smoke or chemical vapors, remove the person to an uncontaminated area and treat for shock. Do not enter the area if you suspect that a life threatening condition still exists (such as heavy smoke or toxic gases).
- xi. If you are currently CPR (Cardio Pulmonary Resuscitation) certified, follow standard CPR protocols. Get medical attention promptly.
- xii. If you or another person's clothing catches fire, extinguish the burning clothing by using the drop-and-roll technique, wrap victim in a fire blanket or douse victim with cold water (use an emergency shower if it is immediately available). Carefully remove contaminated clothing; however, avoid further damage to the burned area. Cover injured person to prevent shock. Get medical attention promptly.

W. Emergency Action Plans

Emergency Action Plans are designed to control events and minimize the effects. Through careful preplanning, establishment of Emergency Action Teams, training and drills, employees can be safeguarded and potential for damage to City assets minimized. Emergency Action Plans include:

- a. Exit routes, meeting areas and employee accounting.
- b. Emergency evacuation, incident command and notification to emergency services.
- c. Personal injury and property damage.
- d. Protection of City information, both hard copy and electronic media.
- e. Bomb threats and facility security.
- f. First Aid Response.
- g. Use of fire extinguishers.

City of Kalispell

Fall Prevention from Heights Guidelines

- A. Purpose
 - a. Falling from a height as low as six (6) feet can result in severe injury or death. Federal guidelines require employees exposed to a potential free-fall greater than six (6) feet must receive fall prevention training and be provided appropriate fall protection. This protection can be in the form of approved safety railings, barricades, nets, full-body harnesses attached to a lanyard and in turn, an anchor point.
- B. Employees should not get closer than six feet to an unprotected edge, platform or walkway of any building, nor utilize elevated equipment unless the employee is properly secured from falling six (6) feet or more.
- C. Employees are also restricted from stepping across any elevated opening greater than twelve (12) inches when that opening is elevated six (6) feet or more above a walking/working surface.
- D. All fall protection equipment shall meet or exceed the appropriate American National Standards Institute (ANSI) standard.
- E. Ladders, walkways, work platforms, and open-sided floors shall comply with Occupational Safety and Health Administration (OSHA) regulations or fall protection must be used.
- F. Safety approved aerial lifts may be used for working at heights, however, all operators must wear approved fall protection and be secured by a lanyard when the working height is six feet or higher.
- G. Lanyards must be attached to prevent a free fall of six (6) feet.
- H. Approved attached points shall be established and marked in areas where lifelines and lanyards are used regularly.
 - a. Lifeline attach points shall be capable of supporting a load of 5,400 pounds.
- I. All fall protection equipment shall be visually inspected for defects prior to each use.
 - a. If there is evidence of excessive equipment wear or deterioration or if mechanical malfunction is detected, the item shall be removed from service.
- J. Fall protection equipment and assemblies shall be inspected according to the manufacturer's recommendations.
 - a. Each belt and lanyard shall bear manufacturer identification marks.
- K. Safety belts or lanyards that have been subjected to an impact load shall be destroyed.
 - a. Load testing shall not be performed on fall protection equipment.
- L. Personnel requiring the use of fall protection equipment shall employ the "Buddy System" or have an observer to render assistance when and if required.

City of Kalispell

Compresses Gas Cylinders – Storage & Use

A. Purpose

- a. Because compressed gas cylinders are used in various applications by the City. Cylinders present significant hazards due to the high pressure of gases contained within the cylinders. Persons using or handling cylinders should receive basic training from their supervisor. At a minimum, this training should include:
 - i. A review of operating and safety protocols for tasks to be performed,
 - ii. Review of appropriate Material Safety Data Sheets (MSDS), and;
 - iii. Hands-on assistance by an experienced gas user. This document presents general guidelines for use, transport and storage of gas cylinders.

B. Using and Transporting Gas Cylinders

- a. Read the label on the cylinder before connecting a new cylinder of compressed gas. If the label is illegible or missing, return the cylinder to the supplier. Don't rely on stenciling or color of the cylinder. Do not use a cylinder with unidentified contents.
- b. Keep cylinders upright. Never lay cylinders containing flammable gases on their sides.
- c. Cylinders should be affixed via a bracket or chains to a permanent building fixture such as a bench or wall during use or storage.
- d. When the cylinder has no regulator attached, replace the valve cover and screw it down.
- e. Transport larger cylinders larger with a hand truck. Rolling or "walking" cylinders is extremely hazardous. Always protect the valve during transport by replacing the valve cover.
- f. Select a regulator recommended for use with your cylinder. The pressure, purity, and corrosive properties of the gas will determine the correct regulator. Never attempt to use a cylinder without a regulator or some other pressure-reducing device in place.
- g. When finished using a compressed gas system, turn off the main cylinder valve, bleed the regulator and lines, and close the regulator. Do not leave the regulator under pressure by closing down flow from the regulator without shutting off the main cylinder valve.
- h. Place an 'empty' tag on the cylinder if its pressure drops below 25 psi.
- i. Flammable gases such as propane, hydrogen, and acetylene always have a red label. However, the color of the cylinder itself is not a good indicator of flammability as different distributors may use different colored cylinders for the same gas. Check the label for flammability.

- j. Gases with Health Hazard Ratings of 3 or 4, or a rating of 2 with no physiological warning properties (arsine, carbon monoxide, hydrogen, phosgene, etc.), MUST be kept in an hood or other ventilated enclosure. Purchase and store the minimum amounts necessary.
 - i. If a hazardous gas cylinder develops a leak, evacuate and restrict area access. Remove sources of ignition if the gas is flammable.
- k. Cylinders not needed for current use should not be stored in laboratories. Recommended maximum retention periods for gases are 36 months for liquefied flammable gases, flammable gases, and oxygen; 6 months for corrosive or unstable gases or those with a Health Hazard Rating of 3 or 4.
- l. Inert gases, such as nitrogen and carbon dioxide must be treated with caution. If left to leak into closed space, these gases may displace oxygen and create a risk of asphyxiation.
- m. Compressed oxygen, while not combustible itself, will cause many materials to burn violently. Never use grease, solvents, or other flammable material on an oxygen valve, regulator, or piping.
- n. Toxic, corrosive, and pyrophoric gases have special handling and storage requirements. Contact the supplier for additional information if you plan to use these gasses.

C. Gas Cylinder Storage

- a. Store cylinders in a well-ventilated area away from ignition sources.
- b. Fuel gases must never be stored in an enclosed area, such as a closet.
- c. Never store cylinders under stairways or in hallways designated for emergency egress.
- d. Keep oxygen cylinders a minimum of twenty feet from flammable gas cylinders.
- e. Mark empty cylinders, close their valves, and segregate them from full cylinders.
- f. Protect the valves by installing the valve caps.
- g. For outdoor storage, provide drainage, overhead cover, and security

City of Kalispell

Heat Stress in the Workplace

- A. Heat stress includes a series of conditions where the body is under stress from overheating. It can include heat cramps, heat exhaustion, heat rash or heat stroke. Each produces bodily symptoms that can range from profuse sweating to dizziness to cessation of sweating and collapse. Heat stress can be induced by high temperatures, heavy work loads, the type of clothing being worn, etc. It is important to know the signs of heat stress and the proper first aid to treat it.

- B. The signs of heat stress are often overlooked by the victim. The employee may at first be confused or unable to concentrate, followed by more severe symptoms such as fainting and/or collapse. If heat stress symptoms occur, move the employee to a cool, shaded area, give him/her water and immediately contact the supervisor.

- C. At-risk Employees
 - a. Some employees are more likely to have heat disorders than others. Younger employees and those more physically fit are often less likely to have problems. Employees with heart, lung or kidney disease, diabetes and those on medications are more likely to experience heat stress problems. Diet pills, sedatives, tranquilizers, caffeinated drinks and excessive alcohol consumption can all exacerbate heat stress effects.

 - b. It often takes two to three weeks for employees to become acclimated to a hot environment. This acclimation can subsequently be lost in only a few days away from the heat. Thus employees should be more cautious about heat stress after coming back from a vacation, when beginning a new job, or after the season's first heat wave. In short, precautions should be taken anytime there are elevated temperatures (approaching 90 degrees F) and the job is physically demanding.

- D. Other Factors
 - a. Other heat stress factors are also very important. In addition to temperature, increased relative humidity, decreased air movement or lack of shading from direct heat (radiant temperature) will all affect the potential for heat stress.

- E. Prevention of Heat Stress - Supervisors:
 - a. Allow time for employees to adjust to hot jobs when possible. It often takes two to three weeks for an employee to become acclimated to a hot environment.

 - b. Adjust the work schedule, if possible. Assign heavier work on cooler days or during the cooler part of the day.

 - c. Reduce the workload. Increase the use of equipment on hot days to reduce physical labor.

 - d. Establish a schedule for work and rest periods during hot days.

- e. Train workers to recognize signs and symptoms of heat stress disorders and be prepared to give first aid if necessary.
- f. Choose appropriate employees. Avoid placing "high risk" employees in hot work environments for extended time periods. Realize individual employees vary in their tolerance to heat stress conditions.

F. Prevention of Heat Stress - Workers:

- a. Learn to recognize the symptoms of heat stress. Pace the work, taking adequate rest periods (in shade or cooler environment).
- b. Use adequate fans for ventilation and cooling, especially when wearing personal protective equipment (PPE).
- c. Wear light colored, loose (unless working around equipment with moving parts) clothing.
- d. Keep shaded from direct heat where possible (e.g., wear a hat in direct sunshine).
- e. Drink plenty of water. In hot environments the body requires more water than it takes to satisfy thirst.

City of Kalispell

Frostbite and Hypothermia

- A. Prolonged exposure to low temperatures, wind or moisture can result in cold-related illnesses such as frostbite and hypothermia. Even temperatures as high as 55 degrees Fahrenheit under the right conditions can lead to hypothermia. Proper awareness and prevention is of outmost importance
- B. How to detect and treat cold-related illnesses
- a. **Frostbite** is the most common injury resulting from exposure to severe cold. Superficial frostbite is characterized by white, waxy, or grayish-yellow patches on the affected areas. The skin feels cold and numb. The skin surface feels stiff but underlying tissue feels soft and pliable when depressed.
 - i. Treat superficial frostbite by taking the victim inside immediately.
 - ii. Remove any constrictive clothing items that could impair circulation. If you notice signs of frostbite, immediately seek medical attention.
 - iii. Deep frostbite usually affects the feet or hands and is characterized by waxy, pale, solid skin. Blisters may appear.
 - 1. Treat deep frostbite by moving the victim indoors and immediately seek medical attention.
 - b. **Hypothermia** occurs when the body's temperature drops below 95 degrees Fahrenheit. Symptoms of this condition include change in mental status, uncontrollable shivering, cool abdomen and a low core body temperature. Severe hypothermia may produce rigid muscles, dark and puffy skin, irregular heart and respiratory rates, and unconsciousness.
 - i. Treat hypothermia by protecting the victim from further heat loss and calling for immediate medical attention.
 - ii. Get the victim out of the cold.
 - iii. Add insulation such as blankets, pillows, towels or newspapers beneath and around the victim.
 - iv. Be sure to cover the victim's head. Replace wet clothing with dry clothing.
 - v. Handle the victim gently because rough handling can cause cardiac arrest. Keep the victim in a horizontal (flat) position. Give artificial respiration or CPR (if you are trained) as necessary.
- C. Preventing cold-related illnesses
- a. Avoid frostbite and hypothermia when you are exposed to cold temperatures by wearing layered clothing, eating a well-balanced diet, and drinking warm, non-alcoholic, caffeine-free liquids to maintain fluid levels.
 - b. Avoid becoming wet, as wet clothing loses 90 percent of its insulating value.

City of Kalispell

Portable Fire Extinguisher Policy

A. Purpose:

For the protection of employees and the assets of the City of Kalispell, select employees will be trained on the proper use of fire extinguishers.

B. Training and education – The City of Kalispell shall:

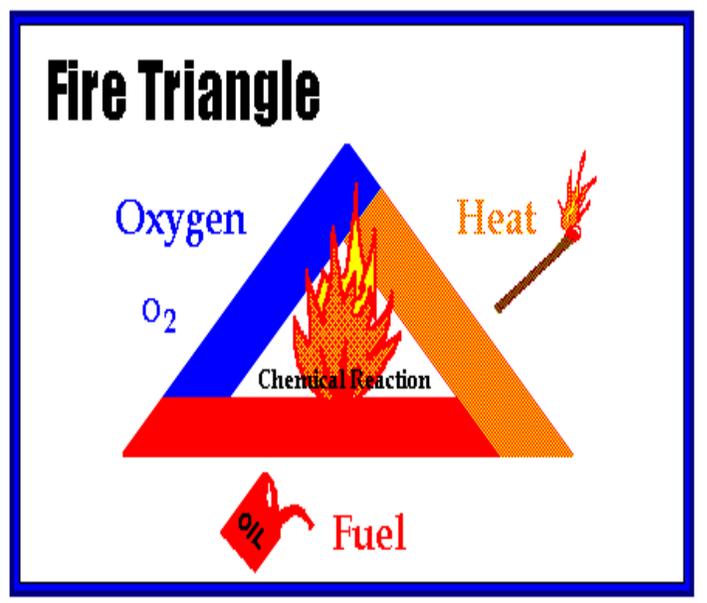
1. Provide an educational program to familiarize employees who have been designated to use a portable fire extinguisher as part of an emergency action plan with training in the use of the appropriate equipment, and with the general principles of fire extinguisher use and the hazards involved with extinguishing incipient stage fires.
2. Provide the education and training required upon initial employment and at least annually thereafter.

C. The Fire Triangle

1. In order to understand how fire extinguishers work, you first need to know a little bit about fire.
 - a. Oxygen, heat, and fuel are referred to as the "fire triangle." Add in the fourth element, the chemical reaction, and you actually have a fire "tetrahedron." The important thing to remember is: take any of these four things away, and you will not have a fire or the fire will be extinguished.

Four things must be present at the same time in order to produce fire:

1. Enough **oxygen** to sustain combustion,
2. Enough **heat** to raise the material to its ignition temperature,
3. Some sort of **fuel** or combustible material, and
4. A chemical reaction.



D. RULES FOR EXTINGUISHING FIRES

1. **Your safety is paramount – only attempt to extinguish a fire if you can do so without endangering yourself or others.**
2. Assist any person in immediate danger to safety, if it can be accomplished without risk.
3. Activate the fire alarm system or dial 911 to report the fire.
4. After assisting anyone in immediate danger and initiating an emergency response (fire alarm or 911), if the fire is small, you may attempt to use an extinguisher to put it out.
5. **If you do not know what is burning, evacuate to a safe location.** If you don't know what is burning, you don't know what type of extinguisher to use. Even if you have an ABC extinguisher, there may be something in the fire that is going to explode or produce highly toxic smoke.
6. **If the fire is spreading rapidly beyond the spot where it started, evacuate to a safe location.** The time to use an extinguisher is in the incipient, or beginning, stages of a fire. If the fire is already spreading quickly, evacuate the area, closing windows and doors behind you if it is safe to do so.
7. **Do Not Attempt to Extinguish the Fire if you do not have adequate or appropriate equipment.**
 - a. **You might inhale toxic smoke.** If the fire is producing large amounts of smoke that you would have to breathe in order to fight it, do not attempt to extinguish the fire. Any sort of combustion will produce some amount of carbon monoxide, but when synthetic materials such as the nylon in carpeting or foam padding in a sofa burn, they can produce highly toxic gases such as hydrogen cyanide and ammonia. These gases can be fatal in very small amounts.
 - b. **Your instincts tell you not to.** If you are uncomfortable with the situation for any reason, evacuate to a safe location.
8. **The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire.** In case the extinguisher malfunctions, or something unexpected happens, you need to be able to get out quickly. Just remember; always keep an exit at your back.

E. The proper way to use a portable fire extinguisher is to use the “PASS” system:

P - Pull the pin

A - Aim the extinguisher's nozzle at the base of the flames

S - Squeeze the handle

S - Sweep the nozzle back and forth, covering the area of fire

F. CLASSIFYING FIRES

Not all fires are the same, and they **are classified according to the type of fuel that is burning**. If you use the wrong type of fire extinguisher on the wrong class of fire, you can make matters worse. Understand the four different fire classifications:



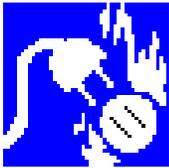
Class A - Wood, paper, cloth, trash, plastics

Solid combustible materials that are not metals. (Class **A** fires generally leave an **Ash**.)



Class B - Flammable liquids: gasoline, oil, grease, acetone

Any non-metal in a liquid state, on fire. This classification also includes flammable gases. (Class **B** fires generally involve materials that **Boil** or **Bubble**.)



Class C - Electrical: energized electrical equipment

As long as it's "plugged in," it would be considered a class C fire. (Class **C** fires generally deal with electrical **C**urrent.)



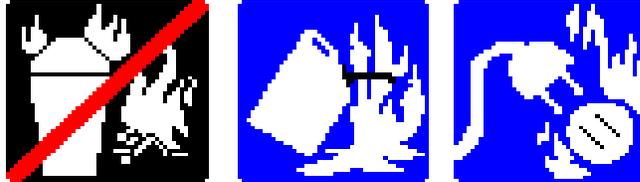
Class D - Metals: potassium, sodium, aluminum, magnesium

Unless you work in a laboratory or in an industry that uses these materials, it is unlikely you'll have to deal with a Class D fire. It takes special extinguishing agents (Metal-X, foam) to fight such a fire.

Most fire extinguishers will have a pictograph label telling you which classifications of fire the extinguisher is designed to fight. For example, a simple water extinguisher might have a label like the one below, indicating that it should only be used on Class A fires.



Carbon Dioxide Extinguisher



Carbon Dioxide Extinguishers are designed for Class B & C (Flammable liquid & Electrical Fires)

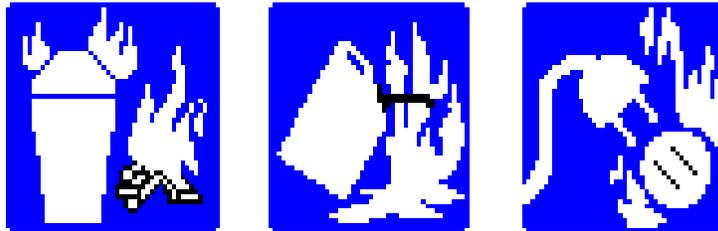
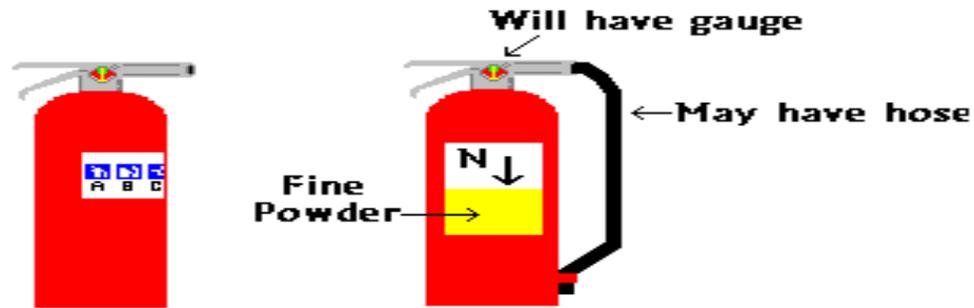
Carbon Dioxide extinguishers are filled with non-flammable carbon dioxide gas under extreme pressure. You can recognize a CO₂ extinguisher by its hard horn and lack of pressure gauge. The pressure in the cylinder is so great that when you use one of these extinguishers, bits of dry ice may shoot out the horn.

CO₂ cylinders are red and range in size from 5 lbs to 100 lbs or larger. In the larger size, the hard horn will be located on the end of a long, flexible hose.

Carbon Dioxide is a non-flammable gas that extinguishes fire by displacing oxygen, taking away the oxygen element of the fire triangle and is also very cold as it comes out of the extinguisher, so it cools the fuel as well.

CO₂s may be ineffective at extinguishing Class A fires because they may not be able to displace enough oxygen to successfully put the fire out. Class A materials may also smolder and re-ignite.

Dry Chemical Extinguisher (ABC)



An "ABC" extinguisher will have a label like this, indicating that it may be used on class A, B and C fires.

Dry Chemical Extinguishers come in a variety of types. You may see them labeled:

- "DC" short for "dry chemical"
- "ABC" indicating that they are designed to extinguish class A,B, and C fires, or
- "BC" indicating that they are designed to extinguish class B and C fires.

ABC extinguishers are red and range in size from 5 lbs to 20 lbs.

Read the labels and know their locations! You don't want to mistakenly use a "BC" extinguisher on a Class A fire, thinking that it was an "ABC" extinguisher.

Dry chemical extinguishers put out fire by coating the fuel with a thin layer of dust, separating the fuel from the oxygen in the air. The powder also works to interrupt the chemical reaction of fire, so these extinguishers are extremely effective at putting out fire.

City of Kalispell
Sling, Shackle & Hook Inspections

A. SLING INSPECTIONS

1. Each day before being used, the sling and all fastenings and attachments shall be inspected for damage and defects.
2. The sling user must determine that the sling is proper for the hitch, load and environment.

B. REMOVAL FROM SERVICE & CRITERIA

1. All slings, shackles or hooks found to fail any inspections are to be immediately removed from service and turned in to your supervisor for further inspection and possibly permanent removal from service.

C. SYNTHETIC WEB SLINGS

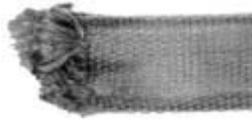
1. Acid or caustic burns
2. Melting or charring of any part of the sling surface
3. Snags, holes, punctures, tears or cuts
4. Broken or worn stitches
5. Excessive abrasive wear
6. Distortion of fittings
7. Knots in any part of the sling
8. Missing or illegible sling identification

WEB STYLE SLINGS

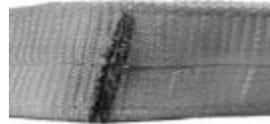
If any damage such as the following is visible, the sling shall be removed from service immediately!



ACID OR CAUSTIC
BURNS



CUTS



CUTS



ACID OR CAUSTIC
BURNS



DISTORTED
HARDWARE



DAMAGED YARN



PUNCTURES



MELTING OR
CHARRING



ABRASIONS



PUNCTURES



MELTING
CHARRING



OR
SNAGS



CUT YARN



FIBER OPTIC



WELD SPATTER



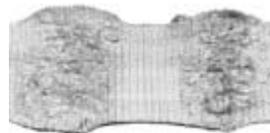
BROKEN OR WORN
STITCHES



DAMAGED EYE



TATTLE
VISIBLE



TAIL
CRUSHED WEBBING



ABRASIONS

D. WIRE ROPE SLINGS

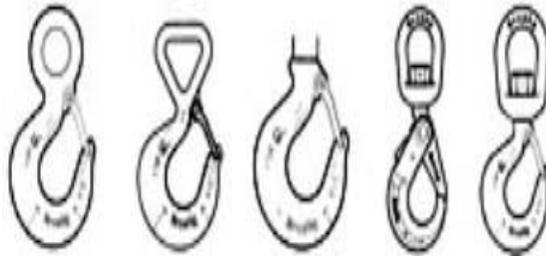
1. For laid and single part slings, ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay.
2. Severe localized abrasion or scraping
3. Kinking, crushing, bird-caging, or any other damage resulting in distortion of the rope structure.
4. Evidence of heat or corrosive damage.
5. End attachments that are cracked, deformed, or worn to the extent that the strength of the sling is substantially affected.
6. Hooks should be inspected in accordance with ANSI B30.10.
7. Severe corrosion of the rope or end attachments.

EXAMPLES OF WIRE ROPE WEAR AND TEAR	
	<p>Here's what happens when a wire breaks under tensile load exceeding its strength. It's typically recognized by the "cup and cone" appearance at the point of failure. The necking down of the wire at the point of failure to form the cup and cone indicates failure has occurred while the wire retained its ductility.</p>
	<p>This is a wire with a distinct fatigue break. It's recognized by the square end perpendicular to the wire. This break was produced by a torsion machine that's used to measure the ductility. This break is similar to wire failures in the field caused by fatigue.</p>
	<p>A wire rope that has been subjected to repeated bending over sheaves under normal loads. This results in fatigue breaks in individual wires -- these breaks are square and usually in the crown of the strands.</p>
	<p>An example of fatigue failure of a wire rope subjected to heavy loads over small sheaves. The breaks in the valleys of the strands are caused by "strand nicking." There may be crown breaks, too.</p>

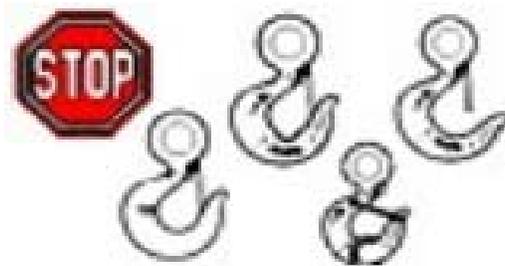
	<p>Here you see a single strand removed from a wire rope subjected to "strand nicking." This condition is a result of adjacent strands rubbing against one another. While this is normal in a rope's operation, the nicking can be accentuated by high loads, small sheaves or loss of core support. The ultimate result will be individual wire breaks in the valleys of the strands.</p>
	<p>A "birdcage" is caused by sudden release of tension and the resulting rebound of rope. These strands and wires will not be returned to their original positions. The rope should be replaced immediately.</p>
	<p>A typical failure of a rotary drill line with a poor cutoff practice. These wires have been subjected to continued peening, causing fatigue type failures. A predetermined, regularly scheduled cutoff practice can help eliminate this type of problem.</p>
	<p>This is localized wear over an equalized sheave. The danger here is that it's invisible during the rope's operation, and that's why you need to inspect this portion of an operating rope regularly. The rope should be pulled off the sheave during inspection and bent to check for broken wires.</p>
	<p>This is a wire rope with a high strand -- a condition in which one or more strands are worn before adjoining strands. This is caused by improper socketing or seizing, kinks or dog-legs. It recurs every sixth strand in a 6 strand rope.</p>
	<p>A kinked wire rope is shown here. It's caused by pulling down a loop in a slack line during handling, installation or operation. Note the distortion of the strands and individual wires. This rope must be replaced.</p>

	<p>Here's a wire rope that has jumped a sheave. The rope "curled" as it went over the edge of the sheave. When you study the wires, you'll see two types of breaks here: tensile "cup and cone" breaks and shear breaks that appear to have been cut on an angle.</p>
	<p>Drum crushing is caused by small drums, high loads and multiple winding conditions.</p>

HOOK INSPECTIONS



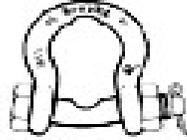
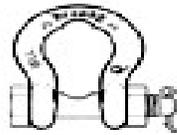
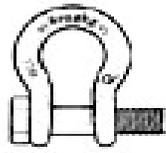
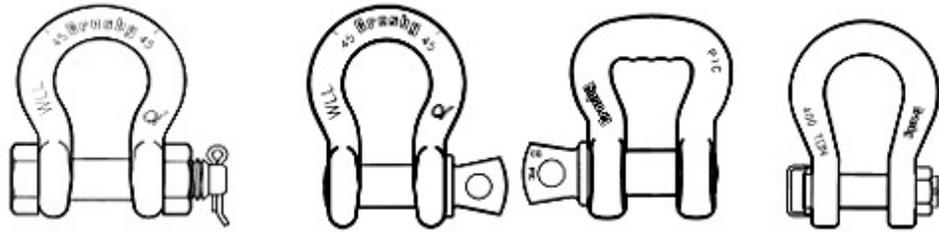
Do not use hooks that show excessive wear, cracks or inoperable locking mechanisms.



E. SHACKLE INSPECTIONS

1. Prior to the use of any crane or lifting device that utilizes a "shackle" it is to be inspected. Do not use a shackle if:

- a. The pin of the shackle should not have wear greater than 10%.
- b. The pin should not be bent.
- c. The bow of the shackle should not have any wear greater than 10%.
- d. The bow of the shackle should not have any change in its normal shape.
- e. Both the bow and pin should not have any cracks or nicks.
- f. Any modifications or parts missing.



City of Kalispell

Respirator Protection Policy

A. Respirator Requirements

- a. Annual fit tests and training are required for all employees who will be required to wear a negative pressure respirator or Self Contained Breathing Apparatus (SCBA).
- b. Employees are responsible for cleaning and maintaining their own respirator.
- c. Whenever any employee becomes aware of a problem or potential trouble of any kind related to respirator use, he or she must notify his or her supervisor at once.
- d. Employees must wear only the respirator (size, model, type) that they were tested and approved for.
- e. Employees must be clean shaven when wearing respirators, disposable masks or emergency self-contained breathing apparatus that uses a half or full face mask.

B. A mustache, sideburns or small beard is permitted, provided they do not interfere with the seal. It is imperative smooth skin be in contact with the respirator sealing surface and the beard short enough to avoid entanglement with the exhalation valve on the inside of the respirator.

C. Supervisors

- a. Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. Duties of the supervisor include:
 - i. Ensuring the employees under their supervision received an initial medical evaluation, appropriate training, initial and then annual fit testing.
 - ii. Ensuring the availability of appropriate respirators and accessories
 - iii. Being aware of tasks requiring the use of respiratory protection
 - iv. Enforcing the proper use of respiratory protection when necessary
 - v. Ensuring respirators are properly cleaned, maintained, and stored according to the respiratory plan, and;
 - vi. Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

D. Directors / Chiefs

- a. It is the responsibility of the Director / Chief or their designee to coordinate and assure that compliance of the respiratory program within their respective department is complied with.

E. Employees

- a. Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained. Employees must also:
 - i. Care for and maintain their respirators as instructed, and store them in a clean

- sanitary location.
- ii. Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly.
- iii. Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.

F. Medical Evaluation

- a. All employees who are required to wear a respirator must receive a medical evaluation.
- b. Employees are not permitted to wear a respirator until a licensed health care professional has determined that they are medically able to do so.
- c. Medical evaluation procedures are as follows:
 - i. The medical evaluation will be conducted using an approved respirator medical questionnaire.
 - ii. The licensed health care professional will review the medical questionnaire and either approve the employee or contractor for respirator use, or require the them to have a medical exam.

G. Use of Respirators

- a. Employees will use their respirator under conditions specified by this program, and in accordance with the training they receive of the use of each particular model. In addition the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- b. All employees shall conduct seal checks each time that they wear their respirator.
- c. Employees shall use either the positive or negative pressure check (depending on which test works best for them).
- d. All employees shall be permitted time to maintain their respirator.
- e. Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures preventing them from achieving a good seal. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the face-piece-to-face seal.
- f. Corrective glasses worn by employees also present a problem when fitting respirators.
- g. Special mountings to hold corrective lenses inside full face pieces are available. If corrective lenses are needed, the face piece and lenses must be fitted by a qualified individual to provide good vision, comfort and proper sealing.
- h. Contact lenses should not be worn while wearing a full face respirator in a contaminated area. Foreign bodies of contaminants that penetrate the respirator may get into the eyes and cause severe discomfort causing the wearer to remove the respirator.

- i. For supplied-air respirators, only Grade D breathing air will be used.

- j. All workers wearing atmosphere-supplying respirators (Hip Airs, SCBA) will work with a buddy. Buddies shall assist workers who experience a malfunction as follows:
 - i. The worker should signal to the buddy that he or she has had a respirator malfunction, and;
 - ii. The buddy shall don an emergency escape respirator and aid the worker in immediately exiting the area.

H. Respirator Cleaning

- a. Respirators are to be regularly cleaned and disinfected by the employee.
- b. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary to maintain sanitary condition.
- c. Atmosphere supplying respirators are to be cleaned and disinfected after each use.
- d. *The following procedure is to be used when cleaning and disinfecting respirators:*
 - i. Disassemble respirator, removing any filters, canisters, or cartridges.
 - ii. Wash the face-piece and associated parts in mild detergent with warm water.
 - iii. Do not use organic solvents.
 - iv. Rinse completely in clean warm water.
 - v. Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
 - vi. Air dry in a clean area.
 - vii. Reassemble the respirator and replace any defective parts.
 - viii. Place in a clean, dry plastic bag or other air tight container.

I. Maintenance

- a. Respirators are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee. Maintenance involves a thorough visual inspection for cleanliness and defects.
- b. Worn or deteriorated parts will be replaced prior to use.
- c. No components will be replaced or repairs made beyond those recommended by the manufacturer.
- d. Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.
- e. *The following checklist will be used when inspecting respirators:*
 - i. Face-piece: Cracks, tears, or holes, facemask distortion cracked or loose lenses / face shield
 - ii. Head strap: Breaks or tears, broken buckles
 - iii. Valves: Residue or dirt, Cracks or tears in valve material
 - iv. Filters / Cartridges: Approval designation, gaskets, cracks or dents in

- housing, proper cartridge for hazard, and;
- v. Air Supply Systems: Breathing air quality /grade, condition of supply hoses, hose connections, settings on regulators and valves.

J. Respirator Cartridge Change Schedules

- a. Employees wearing respirators for protection against nuisance dust and other particulates shall change the cartridges on their respirators when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks.
- b. Respirator cartridges should be changed whenever the employee experiences "break-through" and notices odors inside the respirator.

K. Training

- a. Initially and on an annual basis employees will receive training on respirators. The training course will cover the following topics:
 - i. The City of Kalispell Respiratory Protection Program
 - ii. The OSHA Respiratory Protection Standard
 - iii. Respiratory Hazards encountered at the City of Kalispell and their health effects
 - iv. Proper selection and use of respirators
 - v. Limitations of respirators
 - vi. Respirator donning and user seal (fit) checks
 - vii. Fit Testing
 - viii. Emergency use procedures if employee will use SCBA or Hip Air system.
 - ix. Maintenance and storage
 - x. Medical signs and symptoms limiting the effective use of respirators
- b. Employees must demonstrate their understanding of the topics covered in the training by completing a written test. Respirator training will be documented.

City of Kalispell

Portable Ladder Safety

A. Purpose

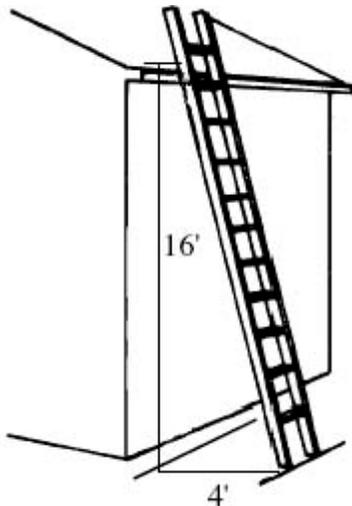
- a. Portable ladders can be dangerous when used incorrectly or when not in good repair.

B. General Rules

- a. Do not stand on the ladder's top three rungs.
- b. Do not use a ladder with a damaged side rail.
- c. The base of the ladder should be spaced (1') one foot away for every (4') four feet it reaches up.
- d. Ladders used to reach a walking surface or roof must extend at least (3') three feet beyond.
- e. The ladder shall be so placed as to prevent slipping, or it shall be lashed, or held in position.
- f. Stepladders should be securely spread open and locked.
- g. Do not use a wet wooden ladder around electrical sources
- h. Keep two feet and one hand on ladder at all times.
- i. Never use a ladder in a strong wind.
- j. Never use a ladder in front of a door unless it is locked, blocked or guarded.
- k. Never carry tools or materials in your hand when going up or down a ladder.
- l. Only one person should be on a ladder at a time.
- m. Never use metal ladders around power lines.

C. Proper Ladder Placement

- a. The ladder should be placed so that its base is one foot away from what the ladder leans against for every four feet in height to the point where the ladder rests. This is referred to as the four-to-one rule. For example, if a 16 foot ladder leans against a wall, its base should be placed four feet from the wall.



Four-To-One Rule

For every four feet of rise the base of the ladder should be one foot away from the object that the top of the ladder is resting.

D. Ladder Maintenance & Pre-use Inspections

a. Wooden Ladders

- i. Check carefully for cracks, rot, splinters, and splinters on uprights.
- ii. Broken or loose rungs, loose joints, bolts or nails, and hardware in poor condition.
- iii. Damaged or worn non-slip bases.

b. Step Ladders

- i. Wobbly (from side strain).
- ii. Loose or bent hinge spreaders.
- iii. Stop on hinge spreaders broken.
- iv. Broken, split, or worn steps.

c. Extension Ladders

- i. Loose, broken, or missing extension locks.
- ii. Defective locks that do not seat properly while extended.
- iii. Worn or rotted rope.

E. Ladders failing inspection

- a. Any ladder that fails an inspection is to be taken out of service immediately and either repaired or disposed of and the supervisor notified.

City of Kalispell Crane and Hoist Operation Safety

- A. All Crane and Hoist Operators must:
 - 1. Be trained in the proper use of cranes and hoists.
 - 2. Complete a pre-operation inspection of the crane or hoist.
- B. All cranes and hoists may not hold a suspended load unattended.
- C. Never walk under a suspended load!
- D. Loads are to be carried at the lowest level possible.
- E. Use appropriate rigging for loads that are to be carried.
- F. Do not side pull with a boom or hoist. (Lift loads vertically).
- G. Never allow shock loading to occur with any load.
- H. Always have at least three wraps on any drum and watch for smooth tracking and wrapping of cable.
- I. Crane Operators must fully understand all hand signals that may be used by the designated person.

Crane Signals



Stop (A)

Extend one arm and hold palm of hand



Stop (B)

(Specifically for high operations)
Arm extended palm down, fist clenched, move hand right and left



Hold Everything

Clasp Hands in front of body.



Hoist

With forearm vertical, forefinger pointing up, move hand in small horizontal circles.



Lower

With arm extended downward, forefinger pointing down, move arm in horizontal circles



Move Slowly

Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal.



Raise Boom

(Lift Up)
Arm extended, fingers closed, thumb pointing



Lower Boom

(Lift Down)
Arm extended, fingers closed, thumb pointing downwards.



Slew

Arm extended, point with finger in direction of boom swing. (For overhead gantry crane move in direction indicated.)



Raise Boom Lower Load

Right arm extended, thumb pointing upward, left arm extended downward swinging in horizontal circles.

upwards.



Lower Boom Raise Load

Right arm extended, thumb pointing downward and left arm and forefinger vertical, left hand in small horizontal circles.



Extend Boom or Trolley Out

(Telescoping Booms) Both fists in front of body with thumbs pointing outwards.



Retract Boom or Trolley In

(Telescoping Booms) Both fists in front of body with thumbs pointing towards each other.



Use Main Hoist

Tap fist on head, then use regular signals



Use Auxiliary Hoist

Tap elbow with one hand, then use regular signals



Finished with Crane

Place arms above head and cross hands.



Travel Machine

(Point Direction)(Crawler Cranes Only) Arms bent at elbow, fists clenched, rotate both forearms around each other.



Travel One Track

(Crawler Cranes Only) Lock the track on one side indicated by raised fist. Travel opposite track in direction indicated by circular

motion of other fist rotated
vertically in front of body.

City of Kalispell

Traffic Control Devices and Lane Closure Policy

A. Introduction

- a. Working on and within the right-of-ways of public roadways has been and will be an integral part of daily activity by City of Kalispell employees. This policy has been developed to ensure the safety of personnel required conducting traffic control. The program contained herein describes reasonable and necessary policies and procedures for any and all facilities, departments, and individuals associated with traffic control. As it is the policy of the City of Kalispell to provide its employees with the safest work environment possible, the City requires conformance with safety standards set herein. A site-specific program may be used, providing it meets or exceeds the requirements set forth in this manual.

B. Purpose

- a. The purpose of traffic control devices and warrants for their use is to help insure safety by providing for the orderly and predictable movement of all traffic, motorized and non-motorized, throughout the City of Kalispell, and to provide such guidance and warnings as are needed to insure the safe and uniform operation of individual elements of the traffic stream
- b. Traffic control devices are used to direct and assist vehicle operators in the guidance and navigation tasks required traversing safely any facility open to public travel.

C. Requirements of Traffic Control Devices

- a. This policy sets forth the basic principles that govern the design and usage of traffic control devices. These principles appear throughout the text in discussions of the devices to which they apply, and it is important that they be given primary consideration in the selection and application of each device. To be effective, a traffic control device should meet five basic requirements:
 - i. Fulfill a need,
 - ii. Command attention,
 - iii. Convey a clear, simple meaning,
 - iv. Command respect of road users, and
 - v. Give adequate time for proper response.
- b. In the case of regulatory devices, the actions required of vehicle operators and pedestrians should be specified by State statute, or by local ordinance or resolution which are consistent with national standards. Uniformity of meaning is vital to effective traffic control devices.
- c. Five basic considerations are employed to insure that these requirements are met: design, placement, operation, maintenance, and uniformity.

- i. **Design** of the device should assure such features as size, contrast, colors, shape, composition, and lighting or reflectorization are combined to draw attention to the device; shape, size, colors, and simplicity of message combine to produce a clear meaning; legibility and size combine with placement to permit adequate time for response; and uniformity, size, legibility and reasonableness of the regulation combine to command respect.
- ii. Except for symbols on traffic control devices, minor modifications in the design of specific design elements of a device may be necessary, provided the essential appearance characteristics are met.
- iii. **Placement** of device should assure it is within the cone of vision of the viewer so that it will command attention; it is positioned with respect to the point, object, or situation to which it applies to aid in conveying the proper meaning; and its location, combined with suitable legibility, is such a driver traveling at normal speed has adequate time to make the proper response.
- iv. **Operation** or application should assure appropriate devices and related equipment are installed to meet the traffic requirements at a given location, Furthermore, the device must be placed and operated in a uniform and consistent manner to assure, to the extent possible; vehicle operators can be expected to properly respond to the device, based on their previous exposure to similar traffic control situations.
- v. **Maintenance** of devices should be to high standards to assure legibility is retained, the device is visible, and it is removed if no longer needed.
 - 1. Clean, legible, properly mounted devices in good working condition command the respect of vehicle operators and pedestrians. In addition to physical maintenance, functional maintenance is required to adjust needed traffic control devices to current conditions and to remove unnecessary traffic control devices. The fact a device is in good physical condition should not be a basis for deferring needed replacement or change.
 - 2. Furthermore, carelessly executed maintenance can destroy the value of a group of devices by throwing them out of balance. For example, replacement of a sign in a group or series by one that is disproportionately large may tend to depreciate others in the vicinity.
- vi. **Uniformity** of traffic control devices simplifies the task of the road user because it aids in recognition and understanding. It aids road users, police officers, and traffic courts by giving everyone the same interpretation.
 - 1. Simply stated, uniformity means treating similar situations in the same way. The use of uniform traffic control devices does not, in itself, constitute uniformity. A standard device used where it is not appropriate is as objectionable as a nonstandard device; in fact, this

may be worse; such misuse may result in disrespect at those locations where the device is needed.

D. Traffic Controls for Street Construction, Maintenance, Utility and Incident Management Operations

- a. During any time the normal function of a roadway is suspended, temporary traffic control planning must provide for continuity of function (movement of traffic, pedestrians, transit operations, and access to property/utilities).
- b. The location where the normal function of the roadway is suspended is defined as the workspace. The workspace is that portion of the roadway closed to traffic and set-aside for workers, equipment, and material. Sometimes there may be several workspaces within the project limits. This can be confusing to drivers because large areas may separate the workspaces.
- c. Effective temporary traffic control enhances traffic safety and efficiency, regardless of whether street, maintenance, utility work, or roadway incidents are taking place in the workspace. Effective temporary traffic control must provide for the safety of workers, road users, and pedestrians. At the same time, it must provide for the efficient completion of whatever activity suspended normal use of the roadway.

E. Fundamental Principles

- a. All traffic control devices used on City of Kalispell street and highway construction, maintenance, utility, or incident management (temporary traffic control) operations shall conform to the applicable specifications of the latest addition of Part VI of the Manual of Uniform Traffic Control Devices

F. Transit Considerations

- a. Provision for effective continuity of transit service (school buses) needs to be incorporated into the temporary traffic control planning process. Oftentimes, public transit buses cannot efficiently be detoured in the same manner as other vehicles (particularly for short-term maintenance projects). On transit routes, the traffic control plan (TCP) shall provide for features such as temporary bus stops, pullouts, and waiting areas for transit patrons.

G. Pedestrian Considerations

- a. There are three threshold considerations in planning for pedestrian safety in temporary traffic control zones on highways and streets:
 - i. Pedestrians should not be led into direct conflicts with work site vehicles, equipment, or operations,
 - ii. Pedestrians should not be led into direct conflicts with mainline traffic moving through or around the work site, and;
 - iii. Pedestrians should be provided with a safe, convenient travel path that replicates as nearly as possible the most desirable characteristics of sidewalks

or footpaths.

H. Worker Safety Considerations

- a. Of equal importance to the safety of the public traveling through the temporary traffic control zone is the safety of the worker performing the many varied tasks within the work site. Work areas present temporary and constantly changing conditions that are unexpected by the traveler. Further, these work area conditions almost always-present situations that are more confusing for the driver. This creates an even higher degree of vulnerability for the personnel on or near the roadway. Below are key elements of traffic control management that should be considered in any procedure for assuring worker safety:
- b. *Training* - All workers should be trained in how to work next to traffic in a way that minimizes their vulnerability. In addition, workers with specific traffic control responsibilities should be trained in traffic control techniques, device usage, and placement.
- c. *Worker Clothing* - Workers exposed to traffic should wear bright, highly visible clothing similar to flaggers.
- d. *Barriers* - Barriers should be placed along the work space depending on such factors as lateral clearance of workers from adjacent traffic, speed of traffic, duration of operations, time of day, and volume of traffic.
- e. *Speed Reduction* - In highly vulnerable situations, consideration should be given to reducing the speed of traffic through regulatory speed zoning, funneling, use of police, lane reduction, or flaggers.
- f. *Use of Police* - In highly vulnerable work situations, particularly those of relatively short duration, stationing police units heightens the awareness of passing traffic and will likely cause a reduction in travel speed.
- g. *Lighting* - For nighttime work, lighting the work area and approaches may allow the driver better comprehension of the requirements being imposed. Care should be taken to ensure that the lighting does not cause blinding.
- h. *Special Devices* - Judicious use of special warning and control devices may be helpful for certain difficult work area situations. These include rumble strips, changeable message signs, hazard identification beacons, flags, and warning lights.
- i. *Public Information* - Improved driver performance may be realized through a well-prepared and complete public relations effort that covers the nature of the work, the time and duration of its execution, and its anticipated effects upon traffic and possible alternate routes.

I. Hand-Signaling Control

- a. The primary function of traffic control procedures is to move vehicles and pedestrians safely and expeditiously through or around temporary traffic control zones while protecting on-site workers and equipment.

J. Hand-Signaling Devices

- a. Hand-signaling devices, such as STOP/SLOW paddles, lights, and red flags are used to control temporary traffic control zones. The STOP/SLOW paddle, which gives drivers more positive guidance than red flags, should be the primary hand-signaling device.
- b. Flag use should be limited to emergency situations and at low-speed and/or low volume locations which can best be controlled by a single flagger.

K. Hand-Signaling Procedures

- a. Hand-signaling procedures shall follow the outline in Part VI of the Manual on Uniform Traffic Control Devices (MUTCD).

L. Qualifications for Flaggers

- a. Because flaggers are responsible for public safety and make the greatest number of public contacts of all highway workers, they should have the following minimum qualifications:
 - 1. Sense of responsibility for the safety of the public and workers
 - 2. Training in safe traffic control practices,
 - 3. Average intelligence,
 - 4. Good physical condition, including sight and hearing,
 - 5. Mental alertness and the ability to react in an emergency,
 - 6. Courteous but firm manner, and;
 - 7. Neat appearance

M. Flagger Stations

- a. Flagger stations shall be located far enough ahead of the workspace so approaching traffic has sufficient distance to stop before entering the workspace.
- b. The flagger should stand either on the shoulder adjacent to the traffic being controlled or in the barricaded lane. At a “spot” obstruction, a position may have to be taken on the shoulder opposite the barricaded section to operate effectively.
- c. A flagger should stand only in the lane being used by moving traffic after traffic has stopped and the flagger needs to be visible to other traffic, or to communicate with drivers.
- d. Because of the various roadway geometrics, flaggers should be clearly visible to approaching traffic at all times.
- e. The flagger should stand alone.

- f. Other workers should not be permitted to congregate around the flagger station.
- g. The flagger should be stationed far enough ahead of the work force to warn them (for example with horns, whistles, etc.) of approaching danger, such as vehicles out of control
- h. Flagger stations should be visible far enough ahead to permit all vehicles to stop. This distance is related to approach speeds, friction factors, and pavement condition. These distances may be increased for downgrades and under certain geometric and traffic situations.
- i. At two-way, unusually low-volume and/or unusually low-speed short lane closings where adequate sight distance is available for the safe handling of traffic, the use of one flagger may be sufficient.
- j. Temporary sign placement shall follow the guidelines in Part VI of the Manual on Uniform Traffic Control Devices (MUTCD).

N. High-Visibility Clothing

- a. For all workers in a traffic control zone, the workers vest, shirt, or jacket shall be orange, yellow, strong yellow green or fluorescent. Retro reflective material shall be worn after dusk, with a visible at a minimum distance of 1,000 feet. The retro reflective clothing shall be designed to identify clearly the wearer as a person and be visible through the full range of body motions.
- b. Uniformed law enforcement officers may be used as flaggers in some locations where enforcement of traffic movements is important. A retro reflective garment as described above shall be worn.

City of Kalispell

Trenching and Shoring Safety Policy

A. Scope and Application:

- a. This policy sets forth the guidelines required for excavations made by the City of Kalispell and Contractors employed by the City of Kalispell.

B. Definitions:

- a. **Aluminum hydraulic shoring** means an engineered shoring system comprised of aluminum hydraulic cylinders (cross braces), used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such a system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.
- b. **Benching** means a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near- vertical surfaces between levels.
- c. **Cave-in** means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by failing or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.
- d. **Competent person** means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
 - i. All competent persons must complete the 4-hour trenching and shoring class, successfully pass the exam, and be certified for successful completion of the class. A competent person should have and be able to demonstrate the following training experience and knowledge of:
 1. soil analysis, and;
 2. use of protective systems, and;
 3. excavation requirements under OSHA regulation 29 CFR 1926 Subpart P.
 - ii. Ability to detect:
 1. conditions that could result in cave-ins,
 2. failures in protective systems,
 3. hazardous atmospheres, and
 4. other hazards including those associated with confined space.
 - iii. Authority to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required.
- e. **Excavation** means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

- f. **Registered professional engineer** means a person who is registered as professional engineer.
- g. **Shield (shield system)** means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees with the structure. Shields can be permanent structure or can be designed to be portable and move along as work progresses. Also known as trench box or trench shield.
- h. **Shoring (shoring system)** means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.
- i. **Sloping (sloping system)** means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline varies with differences in such factors as soil type, environmental conditions of exposure, and application of surcharge loads.
- j. **Trench (trench excavation)** means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also consider to be a trench.

C. General Requirements:

- a. All excavations shall be made in accordance with the rules, regulations, requirements, and guidelines set forth in 29 CE1? 1926.650, .65 1, and .652; the Occupational Safety and Health Administration ~ standard on Excavations, except where otherwise noted below.

D. Procedures:

- a. A competent person shall be placed in charge of all excavations. Underground utilities must be located and marked before excavation begins.
- b. Employees are not allowed in the excavation while heavy equipment is digging.

E. Inspections:

- a. The competent person shall conduct inspections:
 - i. Daily and before the start of each shift
 - ii. As dictated by the work being done in the trench
 - iii. After every rain storm
 - iv. After other events that could increase hazards, such as snowstorm, windstorm, thaw, earthquake, dramatic change in weather. etc.
 - v. When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur.

- vi. When there is a change in the size, location, or placement of the spoil pile
- vii. When there is an indication of change or movement in adjacent structures

F. Soil Types

- a. Because most excavations done by City of Kalispell employees will be conducted in order to repair/replace utilities or equipment (i.e. the soil has been previously disturbed), excavations shall be made to meet the requirements for Type B or Type C soils only, as appropriate.
 - i. **Type A Most stable:** Clay, silty clay, and hardpan (resists penetration) No soil is Type A if it is fissured, is subject too fissured, is subject to vibration of any type, has previously been disturbed, or has seeping water.
 - ii. **Type B - Medium stability:** Silt, sandy loan,, medium clay and unstable dry rock, previously disturbed soils unless otherwise classified as Type C; soils that meet the requirements of Type A soil but are fissured or subject to vibration.
 - iii. **Type C - Least stable:** Gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock, and soil from which water is freely seeping.
 - iv. **Layered geological strata (where soils are configured in layers)** - The soil must be classified on the basis of the soil classification of the weakest soil layer. Each layer may be classified individually if a more stable layer lies below a less stable layer, i.e. where a Type C soil rests on top of stable rock.

G. Testing Methods:

The competent person in charge of the excavation shall be responsible for determining whether the soil is Type B or C. The competent person shall use a visual test coupled with one or more manual tests.

H. Visual Test:

- a. In addition to checking the items on the trench inspection form, the competent person should perform a visual test to evaluate the conditions around the site. In a visual test, the entire excavation site is observed, including the soil adjacent to the site and the soil being excavated. The competent person also checks for any signs of vibration.
- b. During the visual test, the competent person should check for crack-line openings along the failure zone indicating tension cracks, look for existing utilities indicating the soil has been previously disturbed, and observe the open side of the excavation for indications of layered geologic structuring.
- c. This person should also look for signs of bulging, boiling, or sloughing, as well as signs of surface water seeping from the sides of the excavation or from the water table.
- d. In addition, the area adjacent to the excavation should be checked for signs of foundations or other intrusions into the failure zone, and the evaluator should check

for surcharging and the spoil distance from the edge of the excavation.

I. Manual tests

a. Thumb penetration test

- i. Attempt to press the thumb firmly into the soil in question. If the thumb penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. It should be noted that the thumb penetration test is the least accurate testing method.

J. Dry strength test

Take a sample of dry soil. If it crumbles freely or with moderate pressure into individual grains it is considered granular (Type C). Dry soil that falls into clumps that subsequently break into smaller clumps (and the smaller clumps can only be broken with difficulty) it is probably clay in combination with gravel, sand, or silt (Type B).

K. Plasticity or Wet Thread Test

Take a moist sample of the soil. Mold it into a ball and then attempt to roll it into a thin tread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B.

L. Spoil

- a. Temporary spoil shall be placed no closer than 2 feet from the surface edge of the excavation, measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures loose rock or soil from the temporary spoil will not fall on workers in the trench.
- b. Spoil should be placed so it channels rainwater and other run-off water away from the excavation. Spoil should be placed so it cannot accidentally run, slide, or fall back into the excavation.
- c. Permanent spoil should be placed some distance from the excavation.

M. Surface Crossing of Trenches

- a. Surface crosses of trenches should not be made unless absolutely necessary. However, if necessary, they are only permitted under the following conditions:
 - i. Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.
 - ii. Walkways or bridges must:
 1. have a minimum clear width of 20 inches,
 2. be fitted with standard rails, and

3. extend a minimum of 24 inches past the surface edge of the trench.

N. Ingress and Egress

- a. Trenches 4 feet or more in depth shall be provided with a fixed means of egress
- b. Spacing between ladders or other means of egress must be such that a worker will not travel more than 25 feet laterally to the nearest means of egress.
- c. Ladders must be secured and extend a minimum of 36 inches above the landing. Metal ladders should be used with caution, particularly when electric utilities are present.

O. Exposure to Vehicles

- a. Employees exposed to vehicular traffic shall be provided with and required to wear reflective vests or other suitable garments marked with or made of reflectorized or high-visibility materials.
- b. Trained flag persons, signs, signals, and barricades shall be used when necessary.

P. Exposure to Falling Loads

- a. All employees on an excavation site must wear hard hats.
- b. Employees are not allowed to work under loads being lifted or moved by heavy equipment used for digging or lifting.
- c. Employees are required to stand away from equipment being loaded or unloaded to avoid being struck by falling materials or spillage.
- d. Equipment operators or truck drivers may remain in their equipment during loading and unloading if the equipment is properly equipped with a cab shield or adequate canopy.

Q. Warning Systems for Mobile Equipment

- a. The following steps should be taken to prevent vehicles from accidentally falling into the trench:
 - i. Barricades must be installed where necessary,
 - ii. Hand or mechanical signals must be used as required,
 - iii. Stop logs must be installed if there is danger of vehicles falling into the trench,
 - iv. Soil should be graded away from the excavation; this will assist in vehicle control and channeling of run-off water,

v. Trenches left open overnight shall be fenced and barricaded.

R. Hazardous Atmospheres and Confined Spaces

- a. Employees shall not be permitted to work in hazardous and/or toxic atmospheres. Such atmospheres include those with:
 - i. Less than 19.5% oxygen,
 - ii. A combustible gas concentration greater than 20% of the lower flammable limit,
 - iii. Concentrations of hazardous substance that exceed those specified in the Threshold Limit Values contaminants established by the ACGIH, and;
 - iv. All operations involving such atmospheres must be conducted in accordance with OSHA requirements for occupational health and environmental controls for personal protective equipment and for lifesaving equipment. Engineering controls (such as ventilation) and respiratory equipment may be required.

S. Testing for Atmospheric Contaminants

- a. If there is any possibility the trench or excavation could contain a hazardous atmosphere, atmospheric testing must be conducted prior to entry. Conditions might warrant atmospheric testing would be if the excavation was made in a landfill or if the excavation was crossed by, adjacent to, or contained pipelines containing a hazardous material (for example, natural gas lines).
- b. Testing should be conducted before employees enter the trench and should be done regularly to ensure the trench remains safe. The frequency of testing should be increased if equipment is operating in the trench.
- c. Testing frequency should also be increased if welding, cutting, or burning is done in the trench.
- d. Employees required to wear respiratory protection must be trained, fit-tested, and enrolled in respiratory protection program.
- e. Some trenches qualify as confined spaces. When this occurs, compliance with the City of Kalispell's Confined Space Program is also required.

T. Methods of controlling standing water and water accumulation must be provided and should consist of the following if employees must work in the excavation:

- a. Use of special support or shield systems approved by a registered professional engineer.
- b. Water removal equipment, such as well pointing, used and monitored by a

competent person.

- c. Safety harnesses and lifelines used in conformance with 29CFR 1926.104.
- d. Employees removed from the trench during rainstorms.
- e. Trenches carefully inspected by a competent person after each rain and before employees are permitted to re-enter the trench.

U. Benching, Sloping, Shoring, and Shielding Requirements

- a. All excavations or trenches 4 feet or greater in depth shall be appropriately benched, shored, or sloped according to the procedures and requirements set forth in OSHA's Excavation standard, 29 CFR 1926.650, .651, .652.
- b. Excavations or trenches 20 feet deep or greater must have a protective system designed by a registered professional engineer.
- c. Excavations under the base of footing of a foundation or wall requires a support system designed by a registered professional engineer.
- d. Sidewalks and pavement shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse.

V. Sloping

- a. Maximum allowable slopes *for* excavations less than 20 feet based on soil type and angle to the horizontal are as follows:

Soil Type	Height/ depth ratio	Slope angle
Type B	1:1	45 degrees
Type C	1 ½ : 1	34 degrees

A 10-foot-deep trench in Type B soil would have to be sloped to a 45-degree angle, or sloped 10 feet back in both directions. Total distance across a 10-foot-deep trench would be 20 feet, plus the width of the bottom of the trench itself. In Type C soil, the trench would be sloped at a 34-degree angle, or 15 feet back in both directions for at least 30 feet across, plus the width of the bottom of the trench itself

W. Benching - There are two basic types of benching, single and multiple, which can be used in conjunction with sloping.

- a. In Type B soil, the vertical height of the benches must not exceed 4 feet. Benches must be below the maximum allowable slope for that soil type. In other words, a 10-foot deep trench in Type soil must be benched back 10 feet in each direction, with the maximum of a 45-degree angle.
- b. All benched excavations 20 feet or less in depth shall have a maximum allowable

slope of: 1:1.

- c. Benching is not allowed in Type C soil.

X. Shoring

- a. Shoring or shielding is used when the location or depth of the cut makes sloping impractical. There are two basic types of shoring, timber and aluminum hydraulic.
- b. Because the City of Kalispell has aluminum hydraulic shores, they will be the focus of this section. Hydraulic shoring provides a critical safety advantage over timber shoring because workers do not have to enter the trench to install them. They are also light enough to be installed by one worker; they are gauge-regulated to ensure even distribution of pressure along the trench line; and they can be adapted easily to various trench depths and widths. However, if timber shoring is used, it must meet the requirements of 29CFR 1926.650, 651, .652.
- c. All shoring shall be installed from the top down and removed from the bottom up. Hydraulic shoring shall be checked at least once per shift for leaking hoses and/or cylinders, broken connections, cracked nipples, bent bases, and any other damaged or defective parts.
- d. The top cylinder of hydraulic shoring shall be no more than 18 inches below the top of the excavation.
- e. The bottom of the cylinder shall be no higher than four feet from the bottom of the excavation. (Two feet of trench wall may be exposed beneath the bottom of the rail or plywood sheeting, if used.)

Aluminum Hydraulic Shoring - Vertical Shores Soil Type B

DEPTH OF TRENCH (FEET)	HYDRAULIC CYLINDERS				
	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	WIDTH OF TRENCH (FEET)		
			UP TO 8'	8' – 12'	12' – 15'
OVER 5 UP TO 10	8	4	2-INCH DIAMETER	2-INCH DIAMETER NOTE(2)	3-INCH DIAMETER
OVER 10 UP TO 15	6.5				
OVER 15 UP TO 20	5.5				
OVER 20	NOTE(1)				

Aluminum Hydraulic Shoring Waler Systems for Soil Type B

Depth of Trench (Feet)	Wales		Hydraulic Cylinders						TIMBER UPRIGHTS		
	Vertical Spacing (Feet)	Section Modulus In3	Width of Trench (Feet)						Max Horizontal Spacing (on Center)		
			Up to 8'		8' – 12'		12' – 15'		Solid Sheet	2'	3'
			Horz. Spacing	Cylinder Spacing	Horz. Spacing	Cylinder Spacing	Horz. Spacing	Cylinder Spacing			
5' – 10'	4	3.5	8.0	2"	8.0	*2"	8.0	3"	-	-	3
		7.0	9.0	2"	8.0	*2"	9.0	3"			x
		14.0	12.0	3"	12.0	3"	12.0	3"			12
>10' – 15'	4	3.5	6.0	2">	6.0	*2"	6.0	3"	-	3	-
		7.0	8.0	3"	8.0	3"	8.0	3"		x	
		14.0	10.0	3"	10.0	3"	10.0	3"		12	
>15' – 20'	4	3.5	5.5	2"	5.5	*2"	5.5	3"	3	-	-
		7.0	6.0	3"	6.0	3"	6.0	3"	x		

		14.0	9.0	3"	9.0	3"	9.0	3"	12		
>20'	See Note (1)										

Note (1) - For applications other than those listed in the tables, refer to CFR 1926.652(c)(2) for use of manufacturer tabulated data. For trench depths in excess of 20 feet, refer to CFR 1926.652(c)(2) and CFR 1926.652(c)(3).

* - 2-inch diameter cylinders, at this width, shall have structural steel tube (3.5x3.SxO.18⁷5) over-sleeves, or structural over-sleeves of manufacturer specification, extending the full, collapsed length.

- Consult product manufacturer and/or qualified engineer for Section Modulus of available wales.
- Three vertical shores, evenly spaced, must be used to form a system.
- Wales are installed no more than two feet from the top, no more than four feet from the bottom and no more than four feet apart, vertically.

Y. Shielding

- a. Trench boxes are different from shoring because, instead of shoring up or otherwise supporting the trench face, they are intended primarily to protect workers from cave-ins and similar incidents.
- b. The excavated area between the outside of the trench box and the face of the trench should be as small as possible. The space between the trench box and the excavation side must be backfilled to prevent lateral movement of the box. Shields may not be subjected to loads exceeding those, which the system was designed to withstand.
- c. Trench boxes are generally used in open areas, but they also may be used in combination with sloping and benching.
- d. The box must extend at least 18 inches above the surrounding area if there is sloping toward the excavation. This can be accomplished by providing a benched area adjacent to the box.
- e. The manufacturer must approve any modifications to the shields.
- f. Shields may ride two feet above the bottom of an excavation, provided they are calculated to support the full depth of the excavation and there is no caving under or behind the shield.
- g. Workers must enter and leave the shield in a protected manner, such as by a ladder or ramp.
- h. Workers may not remain in the shield while it is being moved

City of Kalispell Vehicle Safety Policy

A. Purpose

- a. To establish guidelines on proper equipment and procedures for safe operation.

B. Policy

- a. All employees operating vehicles and the passengers in these vehicles are required to wear seatbelts at all times.
- b. Drivers must have a current, valid vehicle operator's license appropriate to the vehicle they are operating.
- c. Drivers must comply with all federal, state, and local traffic regulations.
- d. Smoking in City vehicles is prohibited

C. Procedures - Transporting Personnel and Material

- a. Personnel will not be used to support or steady loads while a vehicle is in motion.
- b. Truck running boards may not be ridden
- c. Employees must be seated, with arms and legs within the confines of the vehicle. Employees may mount or dismount vehicles only when fully stopped.
- d. Personnel may not stand and ride in a moving vehicle.
- e. Personnel should vacate all vehicles being loaded by crane, backhoe, shovel, loader, etc.
- f. Loads extending 4 feet beyond the bed of a truck or wagon are to be flagged, and marked at night with red lanterns or clearance lights. Loads are to be secured to prevent any movement.
- g. Only three (3) people may ride in the cab of a truck and seat belts must be used.
- h. When left unattended, vehicles must be shut off and left in gear with brake set.
 - i. If vehicle is parked on a grade or incline, wheels must be chocked.
 - ii. Vehicles are not to be left running while unattended.

D. The following procedures apply to all powered industrial trucks:

- a. All new powered industrial trucks shall meet requirements established in ANSI B 56.1-1969
- b. All nameplates and markings shall remain in place and be maintained in a legible condition,
- c. Only trained and authorized operator shall be permitted to operate powered industrial trucks and equipment. Operators shall be trained in the safe operation of each powered industrial truck used in the City of Kalispell,
- d. No person shall ride on the lifting mechanism of a forklift, unless the forklift is equal with approved work platform,
- e. When a powered industrial truck is left unattended, loads shall be fully lowered, controls neutralized, power shut off, and brakes set,
- f. Wheels shall be blocked if the truck is parked on an incline, and;
- g. If a powered industrial truck is found to be in need of repair, defective, or in any way

unsafe, the truck shall be taken out of service until it has been restored to safe operating condition. All repairs shall be made by authorized personnel.

City of Kalispell Workplace Violence Policy

A. Purpose and Policy Statement

It is the City of Kalispell's policy to promote a safe environment for its employees. The City is committed to working with its employees to maintain a work environment free from violence, threats of violence, harassment, intimidation, and other disruptive behavior. While this kind of conduct is not pervasive at our City, no City is immune. Disruptive behavior at one time or another will affect every governmental agency.

Violence, threats, harassment, intimidation, and other disruptive behavior in our workplace will not be tolerated: That is, all reports of incidents will be taken seriously and will be dealt with appropriately. Such behavior can include oral or written statements, gestures, or expressions that communicate a direct or indirect threat of physical harm. Individuals who commit such acts may be removed from the premises and may be subject to disciplinary action, criminal penalties, or both.

We need your cooperation to implement this policy effectively and maintain a safe working environment. Do not ignore violent, threatening, harassing, intimidating, or other disruptive behavior. If you observe or experience such behavior by anyone on City premises, whether he or she is a City employee or not, report it immediately to a Supervisor or Department Superintendents. Supervisors and Department Superintendents who receive such reports should seek advice from the City Manager, the Human Resources Director and/or the City Attorney.

B. PLEASE NOTE:

THREATS OR ASSAULTS THAT REQUIRE IMMEDIATE ATTENTION SHOULD BE REPORTED FIRST TO THE POLICE BY RADIO OR BY DIALING 911.

C. The City of Kalispell will support all efforts made by Supervisors and Department Superintendents in dealing with violent, threatening, harassing, intimidating or other disruptive behavior in our workplace and will monitor whether this policy is being implemented effectively.

CITY OF KALISPELL
New Employee Safety Orientation Checklist
File this form in the Employee's Personnel Record

Employee Name: _____ PR#: _____ Date: _____

Job/Dept. Assigned: _____ Supervisor: _____

Safety Topics presented during General New Employee Orientation

- General Safety Rules and Policies
- Hazard Communication and Chemical Safety Procedures
- Hearing Conservation
- Control of blood borne pathogens
- Electrical Safety and Lockout/Tag out
- Emergency Plans: Routes and Assembly Locations
- Procedures for Safety violations, accidents, near-miss
- Proper lifting and ergonomic techniques
- Tool and Equipment Safety
- Safety Signs and their meanings
- Process Safety Management Overview

HAZARD COMMUNICATION TRAINING STATEMENT

I have received training on the Hazard Communication, specifically:

- * I am aware of the City of Kalispell's Written Hazard Communication Plan and its location and I know that I may see the written plan by asking my supervisor
- * I am aware of the list of hazardous chemicals used in my workplace and that I may see the list and any Material Data Sheet (MSDS) by asking my supervisor
- * I understand the difference between routine and Non-routine hazards
- * I understand that I am to immediately report any spill of any hazardous material to my supervisor
- * I understand that I am to report any unlabelled containers to my supervisor understand that I am to take all proper precautions with chemicals, including proper use of Personal Protective Equipment, storage, transfer, use, and disposal, and
- * I understand the labeling system used to identify hazardous material.

Employee Signature: _____ Trainer Signature: _____

City of Kalispell - Confined Spaces Entry Permit

Location: _____ Date: _____ Start Time: _____

Work Description: _____

- | | |
|---|---|
| <input type="checkbox"/> All Potential Hazards Reviewed with Entrants / Attendants | <input type="checkbox"/> Escape plan identified |
| <input type="checkbox"/> Retrieval Line(s) in place (If multiple entrants see #11 on "Hazards Check-List) | <input type="checkbox"/> Rescue Team Identified |
| <input type="checkbox"/> Audible &/or Visual Alarm (if required) are available & reviewed with entrants. | |

Name of Entrant(s):	Name of Safety Attendant(s):
1. _____	_____
2. _____	_____
3. _____	Names of Rescue Team Members
4. _____	_____
5. _____	_____

ATMOSPHERE MONITORING: DO NOT ENTER IF CONCENTRATIONS ARE ABOVE OR BELOW ACCEPTABLE ENTRY CONDITIONS

Tests To Be Taken (Test at various levels)	Acceptable Entry Conditions ↓	Test No.	1	2	3	4	5	6	7	8	9	
		Date										
		Time										
		a.m. / p.m.										
Oxygen O₂	19.5 – 23.5%	→										
Combustible Gas LEL	Below 10% LEL	→										
Carbon Monoxide CO	0-25 PPM	→										
Hydrogen Sulfide H₂S	0-9 PPM	→										

Monitor Number: _____ Date of next Calibration: _____ Monitor Use By: _____

POTENTIAL HAZARDS CHECKLIST (Check either yes or no to all and then follow appropriate procedures to eliminate the hazard) (Refer to reference numbers as to what procedure(s) are required to eliminate hazard.)

- | | |
|---|---|
| <p>Yes No</p> <p><input type="checkbox"/> <input type="checkbox"/> Compressed Air / Steam lines ^{1, 5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Hydraulics Systems ^{1,5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Stored Pressure ¹</p> <p><input type="checkbox"/> <input type="checkbox"/> Multiple Entrants ¹¹</p> <p><input type="checkbox"/> <input type="checkbox"/> Constricted Access ^{2, 5, 7, 10}</p> <p><input type="checkbox"/> <input type="checkbox"/> Corrosives ^{1,5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Electrical Hazards ^{1,5,6,8}</p> <p><input type="checkbox"/> <input type="checkbox"/> Engulfment ^{1,5,10}</p> <p><input type="checkbox"/> <input type="checkbox"/> Vertical Entry Required ¹⁰</p> | <p>Yes No</p> <p><input type="checkbox"/> <input type="checkbox"/> Fire ^{3,5,7,9}</p> <p><input type="checkbox"/> <input type="checkbox"/> Flammable Gases or Vapors ^{1,2,3,4,5,6,7,8,9}</p> <p><input type="checkbox"/> <input type="checkbox"/> Improper Lighting ^{8,12}</p> <p><input type="checkbox"/> <input type="checkbox"/> Moving Mechanical Parts ^{1,5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Oxygen (O₂) Deficiency (<19.5%) ^{2,4,5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Purge Tank ^{1,5,10}</p> <p><input type="checkbox"/> <input type="checkbox"/> Slippery Surfaces / Fall Hazards ⁵</p> <p><input type="checkbox"/> <input type="checkbox"/> Supply / Drain Lines ^{1,5}</p> <p><input type="checkbox"/> <input type="checkbox"/> Toxic Gases ^{2,4,5,6,7}</p> |
|---|---|

Note: Procedures taken for all "yes" answers: _____

AUTHORIZATION FOR ENTRY

I have reviewed the above and verify the confined space is safe for entry. All required precautions have been taken and necessary equipment is provided for safe entry and work.

Entry Supervisor Date

Date & Time Confined Space Entry was completed: _____ | _____

WERE ANY PROBLEMS ENCOUNTERED? _____

THIS PERMIT WILL REMAIN ON THE JOB SITE UNTIL THE JOB IS COMPLETED.

Original – Supervisor & Copy to Department Director

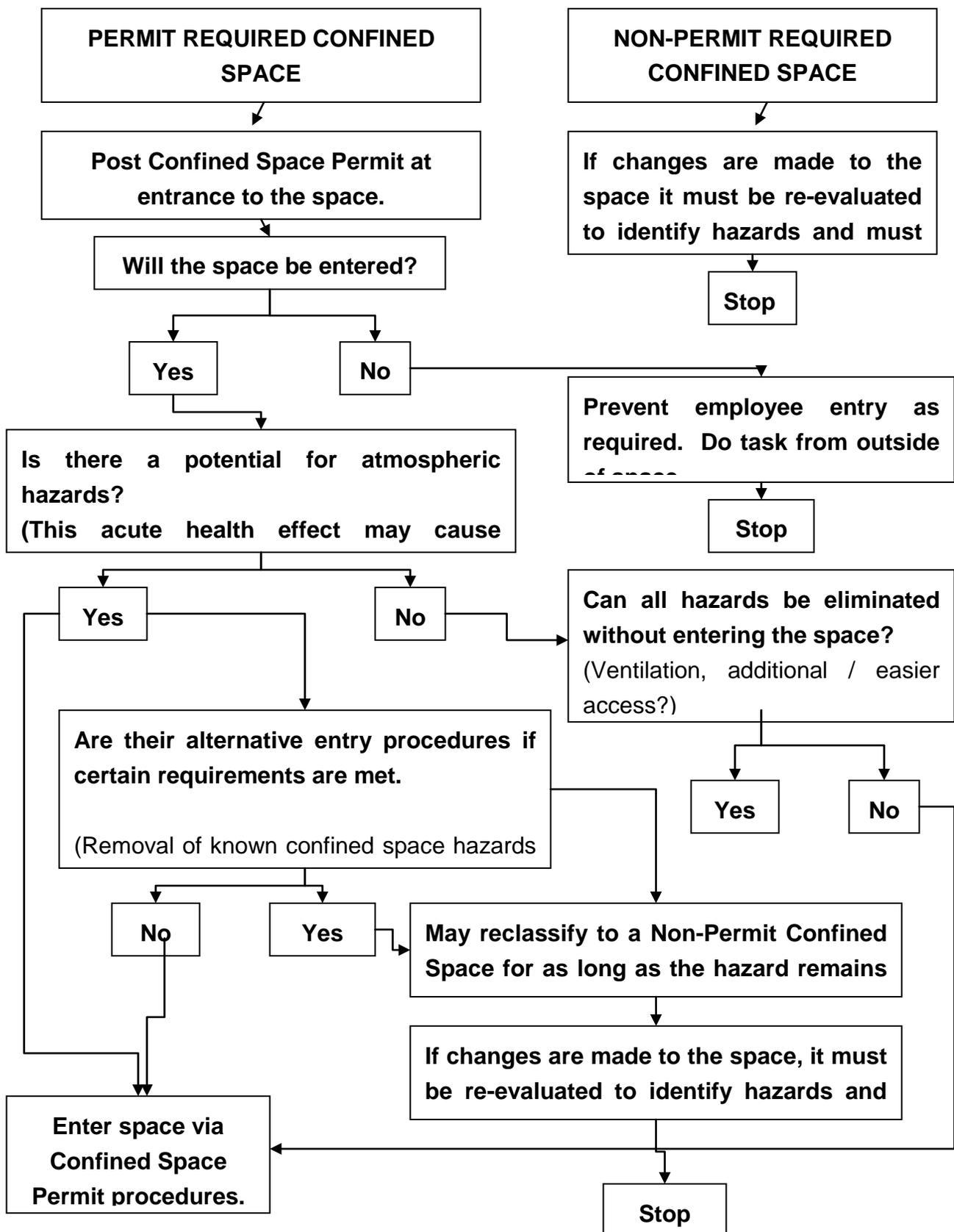
CONFINED SPACES POTENTIAL HAZARDS CHECKLIST AND SAFETY EQUIPMENT / PROCEDURE TO BE USED

1. Lockout / Tagout may be required.
2. Use forced air ventilation to achieve permissible exposure levels.
3. Use of ventilation or self contained breathing apparatus (SCBA), supplied air with escape tank required.
4. Personal Protective Equipment (PPE) should be used to protect against sharp edges, chemical irritants, noise, or other potential hazards (clothing, fall protection, etc.)
5. Use caution if explosion potential exists. Do not enter if Lower Explosive Limit (LEL) is greater than 10%.
6. Monitor with audible alarms must be used to ensure that a change in work environment is detected. Visual alarms should also be available. Monitor atmospheres at all levels.
7. Use double insulated, GFCI protected, low-current, low-voltage electrical equipment. Consult with electrician if required.
8. Use explosion proof electrical equipment, low-voltage lighting, and spark resistant tools.
9. Rescue / hoisting device may be required.
10. Multiple entrants must make provisions for external rescue on all entries, unless it would not contribute to the rescue of a downed entrant.
 - a. Examples of where it would not be practical include:
 - i. A situation where multiple turns in the space would prohibit pulling the entrant out &/or;
 - ii. Where multiple entrants would make it impossible to manage the lines without tangling.
 - b. A single lifeline or retrieval line left in the space may also aid one entrant in helping another out if they should suffer a medical emergency.
 - c. Prior to entry of a confined space by multiple attendants the following must be discussed with all participants.(Supervisor, Safety Attendants and Authorized Entrants)
 - i. Rescue situations / scenarios.
 - ii. What will be maximum number of entrants needed to enter the confined space?
 - iii. Will the retrieval line be attached to an entrant or will it be made available in the vicinity of the workers?
 1. If the retrieval line will result in creating an unsafe situation do to entanglement by others or equipment it may be place in a location close but out of the way of machinery or entrants.
 - iv. The Safety Attendant will be provided an alarming device that can be heard or seen by all entrants. (air horn, whistle, flashing light, etc).
 - v. All entrants must be made aware as to what the alarm device is and the sound &/or light emitted.
 - vi. All entrants must understand that they will exit immediately when told to do so by the attendant or should an alarm condition exist or other emergency.
 - d. All entrants must be wearing a safety / retrieval harness while in the confined space.

e. A retrieval device must be in place.

11. Provide adequate lighting to visualize work or protective glasses to protect eyes

City of Kalispell
Permit Required Confined Space Decision Tree



City of Kalispell
Is it a confined space? Decision Tree

Is it a confined space?

Is the area large enough and so configured that an employee can bodily enter and perform assigned work? (Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.)

Is the area not designed for continuous employee occupancy?

Does the area have limited or restricted means for entry &/or exit? (Any space where an occupant must crawl, climb, twist, be constrained in a narrow opening, follow a lengthy path or otherwise exert unusual effort to enter or leave, or where the entrance may become sealed or secured against opening from inside.)

Yes

No

Not a confined space.

1. Does I contain or have potential to contain a hazardous atmosphere?

A. Oxygen concentrations below 19.5% or above 23.5%

B. Lower Explosive Limit (LEL) above 10%

a. Note: Never enter if level above 10% at any time!

2. Does it contain material that has the potential for engulfing an entrant?

3. Does it have a configuration such that an entrant could be trapped, engulfed or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section?

Yes

No

This is Permit Required Confined Space.

Follow appropriate permit procedures before entrance.

This is a Non-Permit Required Confined Space

**City of Kalispell
Ladder Inspection Checklist**

Use this list to remind yourself of what you should look out for in order to prevent accidents.

General	Needs repair	O.K.	Date repaired
Loose steps or rungs (considered loose if they can be moved at all with the hand)?			
Loose nails, screws, bolts, or other metal parts?			
Cracked, spilt, or broken uprights, braces, or rungs?			
Slivers on uprights, rungs, or steps?			
Damaged or worn non-slip bases?			
Step ladders			
Wobbly (from side strain)?			
Loose or bent hinge spreaders?			
Stop on hinge spreaders broken?			
Loose hinges?			
Broken, split, or worn steps?			
Extension ladders			
Loose, broken, or missing extension locks?			
Defective locks that do not seat properly while extended?			

Worn or rotted rope?			
----------------------	--	--	--

City of Kalispell
Trenching and Excavation Checklist

Date: _____ Project Name and Number: _____

Yes No

- Is the cut, cavity, or depression a trench, or an excavation?
- Is the cut, cavity, or depression more than 4 FT (1.2 m) in depth?
- Is there water in the cut, cavity, or depression?
- Are there adequate means of access and egress?
- Are there any surface encumbrances?
- Is there exposure to vehicular traffic?
- Are adjacent structures stabilized?
- Does mobile have a warning?
- Is a Competent Person in charge of the operation?
- Is equipment operating in or around the cut, cavity, or depression?
- Are procedures required to monitor, test, and control hazardous atmospheres?
- Does a competent person determine soil type?
- Was a soil-testing device used to determine soil type?
- Is the spoil placed 2 FT or more from the edge of the cut, cavity, or depression?
- Is the depth 20 feet or more for the cut, cavity, or depression?
- Has a registered professional engineer approved the procedure if the depth is more than 20 ft?
- Does the procedure require benching or multiple benching? shoring? shielding?
- If provided, do shields extend at least 18 in above the surrounding area if it is sloped toward the excavation?
- If shields are used, is the depth of the cut more than 2 feet below the bottom of the shield?
- Are any required surface crossings of the cut, cavity, or depression the proper width and fitted with handrails?
- Are means of egress from the cut, cavity, or depression no more than 25 feet from the work?
- Is emergency rescue equipment required?
- Is there documentation of the minimum daily excavation inspection?

Checklist Completed by: _____

**CITY OF KALISPELL
VEHICLE PRE-OPERATION SAFETY CHECKLIST**

TIRES	OK	NOT OK	COMMENTS
Tires (properly inflated & no excessive wear)			
LIGHTING			
Turn Signals			
Head lights			
Tail lights			
Brake lights			
Hazard lights			
Traffic Warning Lights			
Fluid Levels			
Engine oil level			
Radiator level			
Power steering			
Other			
MISCELLANEOUS			
Horn			
Mirrors			
Seat belts			
Loose objects secured inside vehicle			
Windshield wipers			
Fire Extinguisher			
Vehicle Body Damage			

Inspected by: _____ Date: _____



CITY OF KALISPELL SAFETY AUDIT CHECKLIST

DEPARTMENT / AREA INSPECTED: _____ DATE: _____

AUDIT PERFORMED BY: _____

A. FIRE PROTECTION & FLAMMABLE / COMBUSTIBLE MATERIALS

- a. Fire extinguishers charged and inspected? Yes No NA
- b. Fire extinguishers are easily accessible and not obstructed? Yes No NA
- c. Combustibles separated from heat sources? Yes No NA
- d. Emergency exits kept free of obstructions and not locked? Yes No NA
- e. "No Smoking" signs posted in areas where flammable liquids are stored? Yes No NA
- f. Flammable liquids stored in fire resistant cabinets? Yes No NA
- g. Explosive gases property stored? Yes No NA

B. PERSONAL PROTECTIVE EQUIPMENT & CLOTHING

- a. Employees wearing proper clothing for the job they are doing? Yes No NA
- b. Employees wearing safety glasses with side shields, as required? Yes No NA
- c. Employees wearing proper safety boots/shoes, as required? Yes No NA
- d. Employees wearing face shields or goggles, when appropriate? Yes No NA
- e. Employees wearing the proper respirator, when required? Yes No NA
- f. Employees wearing hard hats, as required and are they being inspected? Yes No NA
- g. Employees wearing their hearing protection, as required? Yes No NA
- h. Employees who work six feet above the surface using fall protection? Yes No NA

C. WALKING / WORKING SURFACES

- a. Worksites clean, sanitary, and orderly? Yes No NA
- b. Work surfaces kept dry and oil spills cleaned up quickly? Yes No NA
- c. Covered metal waste case used for oily /paint soaked waste? Yes No NA
- d. Work areas adequately illuminated? Yes No NA
- e. Pits, floor openings or holes covered or otherwise guarded? Yes No NA
- f. Aisles and passageways kept clear? Yes No NA
- g. Stairways clear of debris and clean? Yes No NA

D. PORTABLE LADDERS

- a. Ladders maintained in good condition (joints & side rails tight, and movable parts operate freely and no cracks on rails or treads)? Yes No NA
- b. Non-slip feet provided on each ladder? Yes No NA
- c. Ladder rungs and steps free of grease and oil? Yes No NA
- d. Ladders extended 3 feet past (3 rungs) the surface they are climbing on to? Yes No NA

E. FLEET & CRANE SAFETY

- a. Vehicles being inspected each shift prior to use? Yes No NA
- b. Employees adhering to speed limits? Yes No NA
- c. Employees stopping at intersection. Yes No NA
- d. Cranes inspected each shift prior to use? Yes No NA
- e. Audible alarms used as required? Yes No NA
- f. Employees staying clear of suspended loads? Yes No NA

F. LOCKOUT / TAGOUT PROCEDURES

- a. Is all machinery or equipment capable of movement or stored energy (electrical, mechanical, pressure) locked &/or tagged out when servicing,

repairing or adjusting?

Yes No NA

G. CONFINED SPACES

- a. Are confined spaces atmospheres tested prior to entry? Yes No NA
- b. Is there a standby employee trained / equipped to handle emergency there? Yes No NA
- c. Has Security made aware prior to entry to a permit required confined space? Yes No NA

CITY OF KALISPELL
SAFETY AUDIT CHECKLIST (Page 2)

H. ELECTRICAL

- a. Extension cords in good repair? (not frayed or spliced) Yes No NA
- b. Electrical panels kept closed and properly labeled? Yes No NA
- c. Electrical panels easily accessible and clear of obstructions? Yes No NA

I. HAND TOOLS & EQUIPMENT

- a. Tools & equipment used in good condition? Yes No NA
- b. Broken handles replaced prior to use? Yes No NA
- c. Tool heads wedged tightly in the head of all tools? Yes No NA
- d. Chisels and punches reconditioned to prevent mushrooming heads? Yes No NA
- e. Grinders, saws & similar equipment provided with appropriate guards? Yes No NA
- f. Abrasive wheel grinders work rest adjusted to within 1/8" of wheel? Yes No NA

J. MACHINE GUARDING

- a. All pulleys, belts, wheels within 7' of floor properly guarded? Yes No NA
- b. All guards secure? Yes No NA
- c. Are fan blades protected with a guard with openings no larger than 1/2 " ? Yes No NA

K. COMPRESSORS AND COMPRESSED AIR

- a. Compressors equipped with a pressure relief valve and pressure gauge? Yes No NA
- b. Employees aware - not to direct compressed air towards persons? Yes No NA
- c. Compressed air nozzles equipped with diffuser? Yes No NA

L. HAZARD COMMUNICATION (Material Safety Data Sheets)

- a. Is each container for a hazardous substance labeled with the product identity and a hazard warning? Yes No NA
- b. Do employees know where MSDS's are maintained for chemicals. Yes No NA

M. SLING / CHAIN INSPECTIONS

- a. Slings inspected prior to each use? Yes No NA
- b. Damaged slings removed from service? Yes No NA

N. NOTIFICATIONS

- a. Items noted needing attention turned in to appropriate personnel? Yes No NA
- b. List whom you turned items noted into:

i. _____

ii. _____

iii. _____

COMMENTS
