Gering Valley Plumbing & Heating, Inc.

1100 10th Street
Gering, NE 69341

2022 Company Safety Manual

Version 1417
Issued: 2/4/2022

Table of Contents

Company Commitment to Safety:

Here at Gering Valley Plumbing & Heating, Inc. providing a safe and healthy work environment is one of the core values of our company. Safety is a team effort involving everyone from all aspects of our company. Our goal is to provide a quality job done safely to meet all of our customers' expectations. Safety is an important aspect of everyone's job and we want to ensure each and every employee is able to return home safely at the end of the day.

It is the intention of this company's management team to provide safe and healthy working conditions and to establish and insist upon safe practices by all employees.

The prevention of accidents is an objective affecting all levels of the organization and its activities. It is, therefore, a basic requirement that each supervisor make the safety of all employees an integral part of his or her regular management function. It is equally the duty of each employee to accept and follow established safety regulations and procedures.

Every effort will be made to provide adequate training to employees. However, if an employee is ever in doubt on how to do a job safely, it is their duty to stop and ask a qualified person for assistance.

Employees are expected to assist management in accident prevention activities. Unsafe conditions must be reported. Fellow employees that need help should be assisted. Everyone is responsible for the housekeeping duties that pertain to their jobs.

An injury that occurs on the job, even a slight cut or strain, must be reported to management as soon as possible. Under no circumstance, except in an emergency, should an employee leave a shift without reporting any injury that has occurred.

Keeping a safe workplace is a team effort and your involvement, cooperation, and personal commitment to safety are essential. By working together we can make the difference in the safety of ourselves and our fellow employees. By adhering to our safety policies with a positive attitude we can prevent injuries and stay accident free every day.

Bill Schlaepfer
President

Date: 2/4/2022

Injury & Illness Prevention Plan (IIPP)

Responsibility:

The Injury and Illness Prevention Program (IIPP) Administrator, Doneta Schlaepfer, has the authority and responsibility for implementing the provisions of this program.

The Program Administrator is responsible for implementing and maintaining the IIPP in their work areas and for answering employee questions about the company safety policies contained within.

The Program Administrator will see to it that our company's managers and supervisors will assume their respective responsibilities for the safety and health of their assigned staff. Those responsibilities will include, but not be limited to:

- Review safety policies and procedures; become familiar with the functions and responsibilities of supervision and the interrelationships with other departments.
- Develop a sound technical knowledge of all applicable OSHA Safety Orders and Regulations.
- Stay current with requirements made by other government agencies.
- Maintain an occupational training program covering hazards basic to all types of employment and those unique to each worker's job assignment. This training is to be performed in intervals not to exceed every 12 months as OSHA requires.
- Correct unsafe and unhealthy work practices in a timely manner.
- Schedule and conduct regular safety training meetings with all employees. Additional training shall be given as specifically required for different job assignments.
- Perform first-aid duties as required, which will include maintaining appropriate first-aid supplies, dissemination of emergency procedures, and providing first-aid training.
- Keep records of all employee training, corrections of unsafe conditions, and dates and results of workplace inspections. Documentation shall include when an employee demonstrates proficiency, the actual content of the training, the employee's name, and the date of the training.

Subcontractors:

- Subcontractors assigned to job sites under the authority of the Program Administrator shall be approved after review of their applicable safety program, training documents, and relevant safety statistics.
- Safety metrics such as TRIR, EMR, DART, and Fatality Rate may be used as criteria for selecting subcontractors. Subcontractors shall be included in all applicable site meetings such as pre-job/kick-off, site safety orientations, tailgate safety meetings, job safety analysis, hazard assessment and job safety inspections.
- The site supervisor will conduct post job safety performance reviews to retain for consideration of future subcontracting job offers.
- In the event that Gering Valley Plumbing & Heating, Inc. is a subcontractor on any project, all employees shall inform the host employer of:
    - Any unique hazards presented by the contract employer's work.
    - Any unanticipated hazards found during the contract employer's work that the host employer did not mention.
    - The measures the contractor took to correct any hazards reported by the host employer to prevent such hazards from occurring in the future.

Compliance:

Employee Compliance

Management is responsible for ensuring that all safety and health policies and procedures are clearly communicated and understood by all employees. Managers and supervisors are expected to enforce the rules fairly and uniformly. All employees are responsible for using safe work practices, for following all directives, policies and procedures, and for

assisting in maintaining a safe work environment. Our system of ensuring that all workers comply with the rules and maintain a safe work environment include:

1. Informing workers of the provisions of our IIPP.
2. Evaluating the safety performance of all workers.
3. Recognizing workers who perform safe and healthful work practices.
4. Providing training to workers whose safety performance is deficient.
5. Disciplining workers for failure to comply with safe and healthful work practices.

When workers are first employed, they shall be given instructions regarding the hazards and safety precautions applicable to the type of work in question and directed to read/review the Code of Safe Practices at any time they see fit. During orientation, disciplinary policies will be reviewed, and supervisors identified who have the authority and responsibility to take disciplinary action. The below Code of Safe Practices will be maintained as part of the overall Company Safety Manual at a location designated by the Program Administrator. Only qualified persons shall be permitted to operate company equipment and machinery. Where employees are subject to known job site hazards, they shall be instructed in the recognition of the hazard, procedures for protecting themselves, and in first aid procedures in the event of injury.

Supervisor/Manager Compliance

All Supervisors/managers will be trained to familiarize themselves with the safety and health hazards to which employees under their immediate direction and control may be exposed. All supervisors/managers shall coordinate with the Program Administrator to implement any suggested modifications to safety procedures, equipment, and/or to respond to employee questions.

Supervisors shall hold job briefings before the start of each job and include all employees that will be working on that particular job site. The briefing should cover hazards associated with the job, work procedures involved, special precautions, energy source controls, PPE requirements, and the information on the energized electrical work permit, if applicable. Additional job briefings shall be held if changes occur during the course of work that might affect the health and safety of employees.

Disciplinary Policy

The Program Administrator, managers, and supervisors shall oversee and enforce our disciplinary policy. Onsite inspections of worksites shall be conducted to ensure employee compliance with our safety policies and rules. Employees who fail to follow any part of the company safety program which includes but is not limited to:

1. Attending regular safety meetings.
2. Follow any part of the components of this company safety manual.
3. Follow any other written or verbal company safety rules and regulations.
4. Wear/use appropriate PPE for tasks assigned.
5. Do not intentionally alter or damage PPE.
6. No horseplay allowed on worksites or during working hours.
7. No employee shall conduct any type of work while under the influence of drugs or alcohol.

Shall be subject to any of the following disciplinary actions:

1. Written/Verbal Warning.
2. Written Warning with mandatory retraining in applicable area(s).
3. Suspended without pay.
4. Dismissal/Termination.

All disciplinary actions shall be documented and kept in the employee's file. Management reserves the right to determine what disciplinary action up to and including termination is applicable based on the severity of any given violation on a case by case basis.

Code of Safe Practices

Asbestos Awareness

- Asbestos is a naturally occurring mineral fiber that was used in numerous building materials and vehicle products for its strength and ability to resist heat/corrosion. While an undamaged product containing asbestos should be harmless, if damaged or cut into, airborne asbestos fibers pose a significant health hazard. Asbestos fibers can

enter the body when a person inhales or ingests airborne particles that become embedded in the tissues of the respiratory or digestive systems. Asbestos can cause disabling or fatal diseases such as asbestosis, an emphysema-like condition, lung cancer, mesothelioma which is a cancerous tumor that spreads rapidly in the cells of membranes covering the lungs and body organs, and gastrointestinal cancer. The symptoms of these diseases generally do not appear for 20 or more years after initial exposure.

- Buildings built/remodeled prior to 1991 may contain asbestos in various locations:
  - Thermal System Insulation.
  - Roofing shingles and siding.
  - Vinyl floor tiles.
  - Laster, cement, putties and caulking.
  - Ceiling tiles and spray-on coatings.
  - Industrial pipe wrapping.
  - Heat-resistant textiles.
- Asbestos awareness training is required for employees who work in areas that either contain or may contain asbestos. Employees will be trained **Prior** to possible exposure to asbestos and annually thereafter. Training records shall show the employee(s) name, name of instructor, training date, and shall be maintained for no less than 3 years.
- If you witness any exposed fibrous material while working with any of the above listed materials, all employees of Gering Valley Plumbing & Heating, Inc. are required to immediately cease all work and vacate the area until a certified asbestos abatement team can be contacted to investigate, conduct testing, and resolve the situation. This also pertains to employees working on multi-contractor worksites.

Bloodborne Pathogens (BBP)

- Safety training regarding BBP shall be conducted at the time of initial assignment to tasks where exposure to BBP could occur and at least annually thereafter. Annual training for BBP shall be provided to all employees within one year of their previous training. Training records shall be maintained for no less than 3 years.
- Use of universal precautions shall be used any time first aid is administered and/or when exposure to blood or other bodily fluids is likely. Examples of these precautions include:
  - Wear impervious gloves.
  - Wear a face shield to protect entire face.
  - Wear safety goggles to provide complete eye protection.
  - Use resuscitation devices when performing cardiopulmonary resuscitation (CPR).
  - Report all exposures or potential exposures to blood or other body fluids to your supervisor.
  - Wash your hands and affected bodily areas with soap and warm water.
  - Flush your eyes, nose, and/or other mucous membrane areas with water if exposed.
  - Wash down affected work area and equipment with a 10:1 water & bleach solution.
- Required Personal Protective Equipment shall be provided by the company at no cost to the employee.
- Employees will have access to a copy of any applicable site exposure control plan.
- All equipment and/or environmental surfaces contaminated by blood or other infectious materials shall be cleaned and decontaminated promptly using universal precautions.
- Hand washing facilities and/or antiseptic solutions/towelettes will be made available for use at all work locations.
- Any medical records pertaining to an employee with potential BBP exposure shall be maintained for the duration of that employee's employment plus 30 years.
- Per OSHA standard 29 CFR 1910.1030, the Hepatitis B vaccine will be made available to all employees with occupational risk of exposure at no cost to the employee.

Combustible Liquids

- Only OSHA approved containers shall be used when transporting, storing, or when using flammable liquids on the jobsite.
- Flammable liquids shall be kept in closed containers when not in use.
- Leakage or spillage of flammable or combustible liquids shall be disposed of promptly and safely.
- Flammable liquids may be used only where there are no open flames or other sources of ignition within the possible path of vapor travel.
- When flammable liquids are transferred from one container to another, the fill spout, nozzle or fill pipe shall be kept continuously in contact with the edge of the fill opening to prevent the discharge of static sparks.

- Flammable liquids shall be drawn from or transferred into vessels, containers or portable tanks within a building only through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container or portable tank by gravity through an approved self-closing valve.
- Transferring any liquids by means of air pressure on the container or portable tank shall be prohibited.
- Safety glasses and appropriate gloves are to be worn when handling combustible liquids.

Compressed Air and Gas Cylinders & Equipment

- Employees must be trained on the proper use, handling, and storage of compressed gas cylinders.
- Cylinders of compressed gas shall be stored in areas where they are protected from external heat sources such as flame impingement, intense radiant heat, electric arc, or high temperature steam lines.
- Gas identification should be stenciled or stamped on the cylinder or affixed with a label. No compressed gas cylinder should be accepted for use that does not legibly identify its contents by name.
- Inside of buildings, cylinders shall be stored in a well-protected, well ventilated, dry location at least 20 feet from highly combustible materials such as oil or excelsior. Assigned storage spaces shall be located where cylinders will not be damaged by passing or falling objects, or subject to tampering by unauthorized persons.
    - Note: Cylinders should be stored in designated places away from elevators, stairs or gangways.
- Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards except in the case of cylinders containing fire suppressant gases.
- Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials at a minimum distance of 20 feet or by a non-combustible barrier at least 5 feet high, or a minimum of 18 inches above the tallest cylinder and having a fire-resistance rating of at least one hour.
- Compressed gas cylinders shall be stored or transported in a manner to prevent them from creating a hazard by tipping, falling or rolling. Liquefied fuel-gas cylinders shall be stored or transported in a position so that the safety relief device is in direct contact with the vapor space in the cylinder.
- All cylinders which are designed to accept valve protection devices shall be equipped with such devices when the cylinders are not in use or connected for use.
- When a cylinder cap cannot be removed by hand, the cylinder shall be tagged “Do Not Use” and returned to the designated storage area for return to vendor.
- Unless cylinders are secured on a special truck or rack, regulators shall be removed and valve-protected devices, when provided for, shall be put in place before cylinders are moved.
- Compressed gas cylinders in portable service shall be conveyed by suitable trucks to which they are securely fastened; and all gas cylinders in service shall be securely held in substantial racks or secured to other rigid structures so that they will not fall or be knocked over.
    - EXCEPTION: When it is not practicable to transport cylinders by truck, nor to bring in racks to point of operation, as in some construction work, cylinders may be carried in, and properly secured in an adequate manner. For short distances, cylinders may be moved by tilting and rolling them on their bottom edges.
- Gas cylinders transported by crane, hoist or derrick must be handled in suitable cradles, nets or skip boxes, and shall never be lifted by magnet or by slings, unless the slings are designed and constructed to prevent accidental release of the cylinders.
- Valve protection devices shall not be used for lifting cylinders.
    - EXCEPTION: Valve protection devices may be used for manual lifting if they were designed for that purpose.
- Bars shall not be used under valves or valve protection caps to pry cylinders loose when frozen to the ground or otherwise fixed; the use of warm (not boiling) water is recommended.
    - Note: Valve protection devices are designed to protect cylinder valves from damage.
- Cylinder valves shall be closed before moving cylinders, when work is finished, and when emptied. Empty cylinders should be stored in an assigned area away from elevators, stairs, and gangways.
- Cylinders should be marked “MT” and dated when empty.
- Remember never to mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled just as carefully as full cylinders.
- Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled.
- Regulators shall be removed, and cylinders capped before movement.
- Protective caps shall not be used to lift cylinders.
- Visual and other inspections shall be conducted to determine that compressed gas cylinders are in safe condition.

- Cylinders shall not be dropped, struck, or permitted to strike each other violently. Cylinder valves not provided with fixed hand wheels shall have keys or handles on valve spindles or stems while cylinders are in service. In multiple cylinder installations, only one key or handle is required for each manifold.
- Leaking regulators, cylinder valves, hose, piping systems, apparatus and fittings shall not be used.
    - Note 1: Cylinder valves shall not be tampered with nor should any attempt be made to repair them. If trouble is experienced, the supplier should be sent a report promptly, indicating the trouble and the serial number. Supplier's instructions as to its disposition shall be followed.
    - Note 2: Complete removal of the stem from a diaphragm-type cylinder valve shall be avoided.
    - Note 3: Leaking cylinders should be moved to an isolated, well ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it.
    - Note 4: Contact the supplier and ask for response instructions.
- Cylinders shall never be used as rollers or supports, whether full or empty. Cylinders must not be placed where they might form part of an electric circuit.
- No one shall use a cylinder's contents for purposes other than those intended by the supplier.
- Acetylene shall never be brought into contact with unalloyed copper, except via a blowpipe or torch.
- When flammable gas lines or other parts of equipment are being purged of air or gas, open lights or other sources of ignition shall not be permitted near uncapped openings.
- Pressure vessels or other containers shall not be crushed, sheared, baled or otherwise processed for salvage until the employer has made certain that such vessels or containers do not contain hazardous substances or pressures in quantities which would render them unsafe for such salvaging operations.
- No attempt shall be made to open closed pressure vessels or containers of unknown contents until adequate precautionary measures have been taken to eliminate risk of injury to employees. Such precautionary measures may include rupture or perforation of the vessels while they are protected by barricades, enclosures or isolation.
- Only tools provided by the supplier should be used to open and close cylinder valves.
- Compressed air or other compressed gases more than 10 pounds per square inch gauge shall not be used to blow dirt, chips, or dust from clothing while it is being worn.
- Compressed air or gases shall not be used to empty containers of liquids where the pressure can exceed the safe working pressure of the container.
- The use of compressed air shall be so controlled, and proper personal protective equipment or safeguards utilized, as to protect against the possibility of eye or bodily injury to the operator or other workers.
- Abrasive blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.
- Compressed gases shall not be used to elevate or otherwise transfer any substance from one container to another unless the containers are designed to withstand, with a factor of safety of at least four, the maximum possible pressure that may be applied.
- Compressed cylinder gas shall not be used for testing pressure vessels unless there is installed in the compressed gas supply line or on the vessel being tested a pressure relief device set to function at a pressure not to exceed the safe working pressure of the vessel.
- Compressed gas shall never be used from a cylinder or cylinder manifold where pressures dangerous to employees may develop unless an accepted pressure regulating device is installed on the cylinder valve or manifold. The term "accepted" here means that the pressure regulating device is listed by Underwriters' Laboratories or some other recognized authority of equivalent standing.
- Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt, and solvent.
- Cylinder hoses and connectors should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- When not in use, manifold and header hose connections shall be capped.
- Safety glasses and gloves are to be worn when handling compressed gas cylinders and when performing welding, soldering, brazing or cutting operations that require compressed gases.

Construction Site – General Guidelines & Waste Management

- Appropriate and site approved fall protection guidelines will be followed when working 6’ or more above the next stable surface or when working within 6’ of a leading edge. (**See Fall Protection for additional information**.)

- Stabilization of Structures:
    - Employees shall not work from or walk on top plates, joists, rafters, trusses, beams or other structural members until they are securely braced and supported.
- When working around overhead lines, a significant clearance distance (minimum of 12 feet) must be provided or lines will be de-energized or grounded.
- When a qualified person is working near overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown in OSHA Table S5:

TABLE S-5 - APPROACH DISTANCES FOR QUALIFIED EMPLOYEES - ALTERNATING CURRENT

Voltage range (phase to phase)	Minimum approach distance
300V and less	Avoid Contact
Over 300V, not over 750V	1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV	1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV	4 ft. 6 in. (137 cm).

- No worker shall be required or knowingly permitted to work in an unsafe place, unless for the purpose of making it safe and then only after proper precautions have been taken to protect the employee while doing such work.
- Before and during any construction, alteration, or repairs, form and scrap lumber with protruding nails and all other debris shall be kept reasonably cleared from work areas, passageways, and stairs in and around buildings or other structures.
- The ground area within 6 feet of a building under construction shall be reasonably free from irregularities wherever it is practicable to attain this condition by grading or similar methods, and open ditches shall be bridged to provide passageways at convenient times.
- Material storage areas and walkways on the construction site shall be maintained reasonably free of dangerous depressions, obstructions, and debris.
- The amount of waste that will be generated will be estimated prior to work being performed so that the need for containers and waste removal, if necessary, can be determined. The employer will provide the appropriate containers for waste removal, if necessary, prior to beginning any work.
- Employees shall be instructed on the appropriate disposal methods for waste materials generated at each worksite. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes generated are classified as hazardous, employees shall be trained on the hazardous material to ensure proper disposal.
- Prior to removal, waste materials shall be properly stored and handled to minimize the potential for spills that could have an impact on the surrounding environment. Combustible debris accumulated within the building or structure shall be removed promptly during the course of construction.
- Flammable or hazardous wastes shall be placed in covered containers separate from other debris.
- All waste shall be disposed of at intervals determined by the rate of accumulation and capacity of the job site container.
- All debris, waste, and expended materials shall be disposed of in designated receptacles to assist any local efforts in recycling and/or safety procedures.
- Waste, materials, or tools shall not be thrown from buildings or structures to areas where anyone may be located unless the area where the material falls is guarded by fences or other methods/means to prevent people from entering and being struck by falling objects.
- Personal protective equipment shall be maintained and used in accordance with the manufacturer's instructions.
- Safety devices, including protective clothing worn by the employee, shall not be interchanged among the employees until properly cleaned.
    - EXCEPTION: Safety devices worn over shoes or outer clothing, no part of which contacts the skin of the wearer, such as metal foot guards.
- Clothing appropriate for the work being done shall be worn at all times.

- Loose sleeves, tails, ties, frills, lapels, cuffs, or other loose clothing shall not be worn around machinery in which it might become entangled.
- Clothing saturated or impregnated with flammable liquids, corrosive substances, irritants, or oxidizing agents shall be promptly removed, and shall not be worn until cleaned.
- Re-usable containers for individual use and drinking cups shall not be shared.
    - EXCEPTION: Re-usable containers for individual use and drinking cups which are safely and effectively cleaned and sanitized between use by different individuals.
- Non-potable water shall not be used for the purposes of drinking, washing, or food preparation.
- All persons shall follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to the foreman, superintendent, or direct supervisor.
- Anyone known to be under the influence of drugs or intoxicating substances which impair the employee's ability to safely perform their assigned duties shall not be allowed on the job.
- Horseplay, scuffling, and other acts which tend to have an adverse influence on the safety or well-being of other workers shall be prohibited.
- Work shall be well planned and supervised when possible to prevent injuries in the handling of materials and in working together with equipment.
- Management and/or supervisors shall ensure that employees are physically capable of performing all assigned job tasks.
- No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that it might unnecessarily expose the employee or others to injury.
- Employees must report all medications they are taking. Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to perform safely and must also be reported to their supervisor. The employee's activities and behaviors will be monitored to determine if the employee should be removed from the jobsite.
- Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that it is safe to enter. (**See Confined Space Program for more information.**)
- Employees shall be instructed to ensure that all machine guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the safety officer, site foreman or site superintendent as appropriate.
- Workers shall not handle or tamper with any electrical equipment, machinery, and air or water lines, in a manner not within the scope of their duties, unless they have received instructions from their supervisor or site foreman.
- All injuries shall be reported promptly to the safety officer, site foreman/supervisor so that arrangements can be made for medical or first aid treatment.
- When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
- Work shall be so arranged that employees can face ladders and use both hands while climbing.
- Hod carriers should avoid the use of extension ladders when carrying loads. Such ladders may provide adequate strength, but the rung position and rope arrangement make climbing difficult and hazardous.
- All employees or visitors to the worksite shall be made aware of scaffolding in use and ensure safety precautions are observed.
- Any damage to scaffolds, falsework or other supporting structures shall be immediately reported to the site foreman/supervisor and repairs made before use.
- No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the foreman or superintendent.
- When air hoses, water hoses, electric cables, or other equipment of this type is used on staging or other elevated locations, it shall be securely fastened to adequate anchorage.
- Impact wrenches shall be provided with a locking device for retaining the socket.
- Pneumatic hand tools shall be disconnected from the power source, and pressure in hose lines shall be released before any adjustments or repairs are made.
- Airline hose sections shall be tied together except when quick disconnect couplers are used to join sections.
- All hose or other equipment shall be attached at a point no more than 15 feet from the working end.

- Employees shall not work under vehicles supported by jacks or chain hoists, without protective blocking that will prevent injury if jacks or hoists should fail.
- No person shall be permitted to ride on loads, hooks, or slings of any derrick, hoist or crane.

Construction Hand Tools

- Tools having mushroomed heads, split or defective handles, worn parts or other defects that impair their strength or render them unsafe for use shall, be removed from service and shall not be reissued until the necessary repairs have been made.
- Tools not needed for the work to be done shall not be left on scaffolds, ladders, or overhead levels.
- When work is being performed overhead on scaffolds, ladders, or other surfaces, positive methods shall be used to prevent tools from falling.

Construction Hoist/Material Lift

- Employees shall be prohibited from riding the bucket.
- One or a combination of several types of signal systems may be used: Manual, audible or electrical.
- One-Hand Signals to Hoist Operators:
    - Hoist: Forearm vertical and forefinger pointing upward, move hand in small horizontal circle.
    - Lower: Arm extended and palm down, move hand in small vertical circle.
    - Stop: Arm extended horizontally and palm down, hold position rigidly.
    - Emergency Stop: Both arms extended horizontally but move hands rapidly right and left.
    - Dog Off Load: With forearms extended vertically, clasp and unclasp fists several times.
- Two-Hand Signals to Hoist Operators:
    - Hoist: Hold both arms horizontal at sides, fully extended, move upward and return.
    - Lower: Let arms hang at sides, fully extended, move out and return.
    - Stop: Hold both arms horizontal at sides, fully extended, hold position rigidly.
    - Emergency Stop: Hold both arms horizontal at sides, fully extended, move both arms rapidly from back to front.
    - Dog Off Load: Clasp fingers of one hand with fingers of the other, palms facing each other.
- Audible Signals: Audible signals shall not be used when there are surrounding noises of the same or nearly the same frequency and octave level.
- Signals given by means of a whistle, bell, horn, or other audible means are as follows:
    - Hoist: Two short blasts, gongs or bells.
    - Lower: Three short blasts, gongs or bells.
    - Stop: One short blast, gong or bell.
    - Emergency Stop: Series of short blasts, gongs or bells.
    - Dog Off Load: One long blast, gong or bell.
- Electrical Signals. An electrical signal system utilizing bells or lights may be used as follows:
    - Hoist: Two lights or two light flashes.
    - Lower: Three lights or three light flashes.
    - Stop: One light or one light flash.
    - Emergency Stop: Series of light flashes.
    - Dog Off Load: One long light or lighting of separate dog-off light.
- A stop signal may be given by any person witnessing a hazardous situation.
- Workmen shall be prohibited from riding the hoist platform except for authorized inspection and maintenance.
- When wheelbarrows or other rolling equipment are transported, they shall be held securely in place on the hoist platform.
- Hard hats, safety glasses, and gloves are to be worn during hoisting operations.

Containers for Hazardous Materials

- Employees shall follow all procedures and other precautions before cleaning or subsequent use or disposal of a container that held hazardous materials.
- No welding, cutting or other hot work shall be performed on used drums, barrels, tanks or other containers until they have been cleaned so thoroughly as to make certain that there are no flammable materials present or any substances such as grease, tar, acid or other materials which, when subjected to heat, might produce flammable or toxic vapors.

- Any pipelines or connections to the drum or vessel shall be disconnected or blanked. All hollow spaces, cavities and/or containers shall be vented to permit the escape of air or gases before preheating, cutting or welding.

Cranes - Exposure

- During crane operations, a signal person shall be provided when the point of operation is not in full and direct view of the operator unless a signaling or control device is provided for safe direction of the operator.
- One or a combination of several types of signal systems may be used: Manual, audible or electrical.
- One-Hand Signals to Hoist Operators:
    - Hoist: Forearm vertical and forefinger pointing upward, move hand in small horizontal circle.
    - Lower: Arm extended and palm down, move hand in small vertical circle.
    - Stop: Arm extended horizontally and palm down, hold position rigidly.
    - Emergency Stop: Both arms extended horizontally but move hands rapidly right and left.
    - Dog Off Load: With forearms extended vertically, clasp and unclasp fists several times.
- Two-Hand Signals to Hoist Operators:
    - Hoist: Hold both arms horizontal at sides, fully extended, move upward and return.
    - Lower: Let arms hang at sides, fully extended, move out and return.
    - Stop: Hold both arms horizontal at sides, fully extended, hold position rigidly.
    - Emergency Stop: Hold both arms horizontal at sides, fully extended; move both arms rapidly from back to front.
    - Dog Off Load: Clasp fingers of one hand with fingers of the other, palms facing each other.
- Audible Signals: Audible signals shall not be used when there are surrounding noises of the same, or nearly the same, frequency and octave level.
- Signals given by means of a whistle, bell, horn, or other audible means are as follows:
    - Hoist: Two short blasts, gongs or bells.
    - Lower: Three short blasts, gongs or bells.
    - Stop: One short blast, gong or bell.
    - Emergency Stop: Series of short blasts, gongs or bells.
    - Dog Off Load: One long blast, gong or bell.
- Electrical Signals. An electrical signal system utilizing bells or lights may be used as follows:
    - Hoist: Two lights or two light flashes.
    - Lower: Three lights or three light flashes.
    - Stop: One light or one light flash.
    - Emergency Stop: Series of light flashes.
    - Dog Off Load: One long light or lighting of separate dog-off light.
- In the event of any known malfunction, an alternate signal system shall be used, or all motion shall be stopped.
- During crane operations, when there is a potential for accidental contact by cranes operating within the boom swing radii of one another, the employer shall ensure effective communication to notify crane operators and signal persons of the presence of other cranes.
- No employees will be allowed under a suspended load.
- Employees shall obey all barriers placed around the crane to keep clear of loads and swing radii of the crane.
- Only authorized employees shall be allowed to approach the crane and/or loads.
- Hardhats are to be worn when working in or near the vicinity of a crane.

Cranes - Operations

- **Before any work begins**, a hazard assessment shall be performed to identify the work zone. The work zone boundaries shall be marked with flags, range limiting devices or defined as 360 degrees around the equipment up to the maximum working radius. The assessment shall include a determination if the equipment could get closer than 20’ to a power line and provide for the appropriate control measures.
- Control measures must, at a minimum, include one of the following:
    - Ensure the power line has been de-energized and visibly grounded.
    - Ensure no part of the equipment, load line or load gets closer than 20’ to the power line.
    - Determine the line’s voltage and minimum approach distance permitted in Table S-5. (**See Low-Voltage Electrical Systems for more information.)**

- A visual inspection of equipment for apparent deficiencies shall be conducted by a competent person prior to each shift. The inspection must include control mechanisms, pressurized lines, hooks and latches, wire rope, electrical apparatus, tires or tracks and ground conditions.
- A competent person will inspect equipment on a monthly basis and provide documentation that the inspection was completed. The documentation shall include the following:
    - Items checked.
    - Results of the inspection.
    - Name of the inspector.
    - Date of the inspection.
- Inspection documentation shall be retained for 3 months.
    - EXCEPTION: monthly documented inspections are not required if the daily inspection is documented and those records are retained for 3 months.
- All safety devices provided by the manufacturer shall be installed on equipment and in proper working order before any work begins. Safety devices may include crane level indicator, boom stops, jib stops, horns, etc. Any equipment found with safety devices removed or in defective condition shall be taken out of service until the missing safety devices are installed or the defective devices repaired.
- No modifications of equipment shall be allowed until written approval by the manufacturer or a professional engineer, who is qualified and knowledgeable regarding the equipment involved, and will ensure the original safety factor of the equipment is not reduced, is received.
- Where two-way radios are used, a dedicated frequency shall be provided for communication among operators during the use of cranes.
- During crane operations, a signal person shall be provided when the point of operation is not in full and direct view of the operator, unless a signaling or control device is provided for safe direction of the operator. (**See Crane – Exposure for more information.)**
- Cranes and hoists must not be assembled or used unless ground conditions are drained, firm, and graded sufficiently so that with the use of supporting materials, if necessary, the manufacturer's specifications for adequate support and degree of level of the equipment is met.
- The load capacity of the crane shall not be exceeded.
- Employees shall follow all manufacturer's procedures and instructions when assembling and/or disassembling equipment and as directed by a qualified person.
- Operations of cranes and hoists shall be conducted, and the job controlled in a manner that will avoid exposure of employees to the hazard of overhead loads.
- Wherever loads must be passed directly over workers, occupied work spaces or occupied passageways, safety type hooks or equivalent means of preventing the loads from becoming disengaged shall be used.
- When rotating the crane, sudden stops shall be avoided.
- Rotational speed shall be such that the load does not swing out beyond the radius at which it can be safely controlled.
- The swing radius of the crane shall be marked and/or barricades used if the crane has the potential to strike, injure and/or pin an employee against another object.
- Cranes or boom-type excavators shall not be mounted by personnel, unless the unit is stopped or an exchange of signals with the operator indicates that it is safe to mount.
- Only employees authorized by the employer and trained/certified in the safe operation of cranes or hoisting apparatus shall be permitted to operate such equipment. The employer shall ensure the operator has been qualified by one of the following:
    - Certification by an accredited crane operator testing organization.
    - Qualification by an audited employer program.
    - Qualification by the US military.
    - Licensing by a government entity.
- All operators shall follow and comply with the manufacturer's procedures in the operation of the equipment including its use with attachments.
- The manufacturer's operational manual must be stored and readily available in the cab at all times.
- Trainees may be authorized to operate cranes or hoisting apparatus provided they are under the supervision of a qualified operator.
- Qualified persons shall do adjustments and repairs.

- Before adjustments and repairs are started on a crane or derrick, the following precautions shall be taken:
    - Cranes shall be placed where they will cause the least interference to and be least interfered with by other equipment or operations in the area.
    - Boom and load block shall be lowered to the ground or floor, if possible, or otherwise secured against dropping.
    - All power controls shall be locked or otherwise secured in the stop position and starting means rendered inoperative.
    - Warnings and barriers shall be placed to warn others from danger area and protect the crane under repair from being struck by other machines or equipment.
- After all repairs and adjustments have been made, the crane shall not be operated until all guards have been reinstalled, safety devices reactivated, and maintenance equipment removed, including all loose material.
- Adjustments shall be maintained to assure correct functioning of the following components:
    - All functional operating mechanisms.
    - Safety devices.
    - Control systems.
    - Power plants.
    - Brakes.
- When welding repair procedures are required on load sustaining members, instructions shall be provided by the certified agent and those instructions shall be followed where applicable.
- Welds on all critical crane or derrick parts shall be performed only by qualified welders who are certified to perform high quality welding.
- All repair welds performed on critically stressed members, such as boom chord, mast chord, and main deck girders (where permitted by a certified agent), shall be magnetic particle tested or tested by ultrasonic or other suitable nondestructive means as well as visually inspected.
- All indicated repairs shall be made promptly and records of the most recent test shall be kept until a new test is conducted or until the part is permanently removed from service.
- Prior to further use, boom sections or boom suspension components that have been damaged shall be repaired, restoring them to not less than the capacity of the original section or components.
- Repairs to critically stressed members of a boom or boom extension, such as a boom chord, mast chord, or boom sections, shall be performed in accordance with the manufacturers' or certified agent's recommendations.
- New or replacement booms or boom extensions shall be tested before use.
- No employee shall be permitted to ride on loads, hooks, or slings of any derrick, hoist, or crane.
- No repairs shall be made on crane runways, supporting structures, or equipment within reach of the runway unless a wheel stop capable of preventing crane movement within the work area is secured to each rail and a warning sign is placed on each rail a reasonable distance from the workers.
- Loose material, tools, lunch box, clothing, etc., shall be stored in a manner which will not interfere with the operation of the crane or derrick controls.
- The operator shall respond to signals only from the appointed signal person.
    - EXCEPTION: The operator shall obey a stop signal at any time, given by any person.
- Whenever the operator doubts the safety of a movement, the operator shall be authorized to stop the hoisting operation until safety has been assured.
- A warning signal shall be sounded as required, particularly when approaching workers.
- Before leaving the crane unattended, the operator shall be required to:
    - Land or properly secure any attached load, bucket, lifting magnet, or any other device.
    - Disengage clutch.
    - Set travel, swing, boom brakes, and other locking devices unless otherwise specified by the certified agents.
    - Put controls in the "off" position.
    - Stop the engine or motor.
    - Secure crane against accidental travel.
- Before closing the switch or starting the engine, all controls shall be in the "off" position and all personnel in the clear.
- If power fails during operation, the operator shall be required to:
    - Set all brakes and locking devices.

    - Move all clutch or other power controls to the "off" position.
    - If practical, the suspended load shall be landed under brake control.
- The operator shall be required to test all controls at the start of a new shift. If any controls do not operate properly, they shall be adjusted or repaired before operations are begun.
- Hard hats, safety glasses, and gloves are to be worn by ground and rooftop personnel when rigging loads are to be hoisted and when receiving loads.

Cranes - Rigging

- Rigging equipment shall be inspected before each shift to ensure it is safe to use.
- Rigging equipment for material handling shall be inspected:
    - Prior to use on each shift.
    - As necessary during its use to ensure that it is safe.
- Defective rigging shall not be used and will be immediately removed from service.
- Rigging equipment loads shall not exceed its recommended safe working load.
- Rigging shall have identification markings, affixed permanently to the rigging, which indicates the rated capacity for the type(s) of hitch(es) used, the angle upon which it is based and the number of legs if more than one.
- Rigging equipment, when not in use, shall be removed from the immediate work area.
- Tag lines shall be used unless their use creates an unsafe condition.
- Safety latches will be in place on all hooks, eliminating the hook throat opening, or an alloy anchor type shackle with a bolt, nut, and retaining pin may be used.
- All employees shall be kept clear of suspended loads or loads about to be lifted.
- Hard hats, safety glasses, and gloves are to be worn by ground and rooftop personnel when rigging loads are to be hoisted and when receiving loads.

Elevating Work Platforms / Aerial Lifts

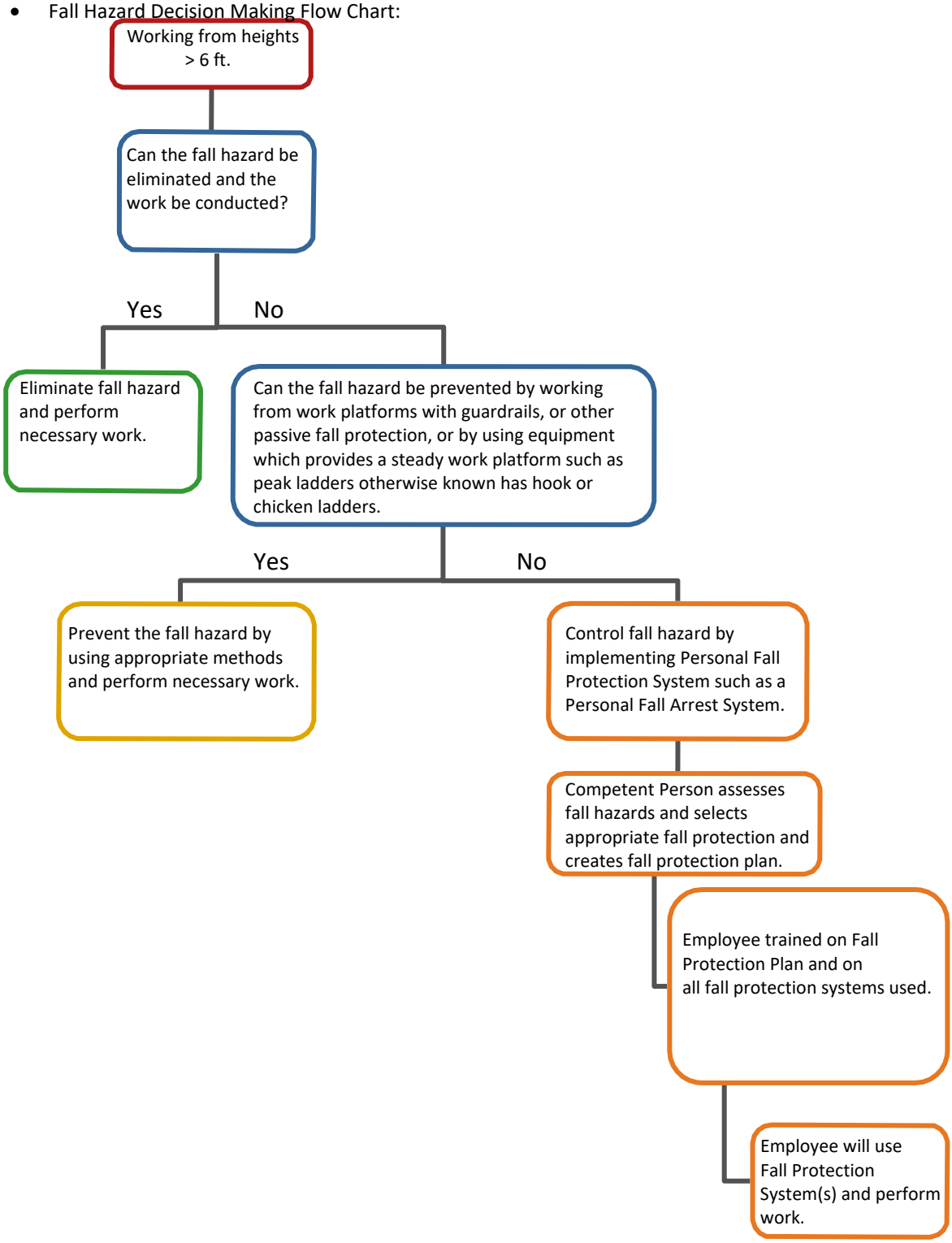
- Only authorized employees will use any elevating work platform. Employees will be properly trained on the assigned elevating work platform and shall review the manufacturer's recommended fall protection and operating guidelines **PRIOR** to use.
- Pin-on platforms shall be securely pinned to the boom or boom extension.
- Employees shall wear an approved fall restraint system while working from an elevating work platform or aerial lift and the fall restraint system must be attached to the lift.
- No employee shall ride, nor tools, materials or equipment be allowed on a traveling elevated platform unless the following conditions are met:
    - The travel speed at maximum travel height does not exceed 3 feet per second.
    - Self-propelled units shall be equipped with electrical or other interlock means which will prevent driving them with the platform height greater than the maximum travel height or at speeds greater than permitted at maximum travel height.
    - The surface upon which the unit is being operated is level with no hazardous irregularities or accumulation of debris which might cause a moving platform to overturn.
- Units shall be assembled, used and disassembled in accordance with the manufacturer's instructions.
- Units shall be inspected for damaged and defective parts before use. This includes ensuring that the backup alarm is functional, or a spotter is utilized when unit is in use.
- Units shall not be loaded more than the designated working load and shall be taken out of service when damaged or weakened from any cause. They shall not be used until repairs are completed.
- Employees shall not sit, stand or climb on the guardrails of an elevating work platform or use planks, ladders or other devices to gain greater height or reach.
- Employees shall not work on units when exposed to high winds, storms or when the unit is covered with ice or snow, unless provisions have been made to ensure the safety of the employees.
- Unstable objects such as barrels, boxes, loose brick, tools, or debris shall not be allowed to accumulate on an elevated work level.
- In operations involving production of small debris, chips, etc. and the use of small tools and materials and where persons are required to work or pass under the equipment, screens shall be required between toeboards and guardrails. The screen shall extend along the entire opening, shall consist of No. 18 gage US Standard Wire, 1/2-inch mesh or equivalent.

- Unless recommended for such use by the manufacturer, no elevating work platform shall be used on an inclined surface.
- Procedures for maintaining stability must be clearly outlined in the special warnings section. The user shall not deviate from the manufacturer's instructions.
- All aerial devices and elevating work platforms shall be assembled and erected by a qualified person in accordance with the manufacturer's specifications and shall be maintained in safe operating condition. No modifications shall be made to the equipment without written approval from the manufacturer.
    - If the manufacturer is no longer in business and instructions are no longer available, assembly and erection shall be performed by a qualified person under the direction of a registered professional engineer experienced in the design of elevating work platforms or aerial devices.
- Employees using elevating work platforms or aerial devices in proximity to energized high voltage lines shall maintain a minimum clearance of 10 feet at all times.

Fall Protection

- **BEFORE any work begins whether commercial or residential**, a qualified person shall develop a site-specific fall protection plan by performing a risk hazard assessment to identify what, if any, fall protection method(s) are required for the specific jobsite and work to be performed. The fall protection plan will provide provision for the prompt rescue of any employee(s) in the event of a fall or shall assure the employee(s) are able to rescue themselves through their personal fall protection system.
- The site-specific fall protection plan shall be maintained up-to-date as work progresses. Any changes to the fall protection plan shall be approved by a qualified person. A copy of the site-specific fall protection plan with all approved changes shall be maintained at the job site. The plan shall be under the supervision of a competent person.
- Fall protection training is provided to each employee at risk for fall hazards at least annually with the specific purpose of recognizing fall hazards and how to eliminate these hazards. Demonstrations of company provided fall protection equipment shall be provided during these annual trainings. Training records shall show the employee(s) name, name of instructor, training date, and shall be maintained for no less than 3 years.
- Retraining will occur when the following conditions occur:
    - It is determined that employees already trained do not have the necessary understanding or skill to safely carry out assigned tasks.
    - Work place changes.
    - Fall protection systems or equipment changes that render previous training obsolete.
    - Site specific hazards and/or post-accident.
- The employer shall provide for the prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- In case of a fall or near miss, the site supervisor and/or company safety officer shall be notified, and appropriate first aid emergency response procedures will be followed.
- After a fall or near miss the Program Administrator shall conduct an incident investigation into the events that led up to the accident or near miss and evaluate the fall protection plan developed for the worksite for potential updates to practices, procedures, and/or training of employees to prevent reoccurrence.

- Fall Hazard Decision Making Flow Chart:



- Employees shall be required to use an approved personal fall protection system in accordance with all applicable requirements regardless whether on a commercial or residential site if at any time they are exposed to falling 6 feet or more from an unprotected side or edge to the next stable floor surface or when working within 6 feet of a leading edge:
    - An approved personal fall protection system includes: Guardrails, safety nets, and/or personal fall arrest systems (harness and tie-off lines). All fall protection equipment will meet the applicable requirements of ANSI, ASTM, and/or OSHA.
    - An approved personal fall protection system includes: Guardrails, safety nets, and/or personal fall arrest systems (harness and tie-off lines). All fall protection equipment will meet the applicable requirements of ANSI, ASTM, and/or OSHA.
    - Personal fall arrest systems:
        - When stopping a fall shall limit maximum arresting force on an employee to 1,800 pounds when used with a body harness.
        - Shall be rigged in such a way that the employee can neither free fall more than 6 feet, nor contact any lower level and, where practicable, the anchor end of the lanyard shall be secured at a level not lower than the employee's waist.
        - The personal fall arrest system shall be able to bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3½ feet and have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less.
        - Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed and used as follows:
            - As part of a complete personal fall arrest system which maintains a safety factor of at least two, and under the supervision of a qualified person.
        - Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
        - Any lanyard, safety belt, harness, dropline, lifeline or other component subjected to in-service loading, such as loading equivalent to that received in a drop test, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding.
        - Each personal fall arrest system shall be inspected not less than twice annually by a competent person in accordance with the manufacturer's recommendations and the date of each inspection shall be documented.
    - Positioning device systems and their use shall conform to the following provisions:
        - Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet.
        - Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.
        - The use of non-locking snaphooks shall be prohibited after January 1, 1998.
        - Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.
    - When personal fall protection systems are deemed infeasible and/or create a greater safety hazard, a safety monitoring system may be authorized by the Program Administrator and a site-specific alternate fall protection plan shall be prepared by a qualified person and the plan must be maintained up-to-date as work progresses. Any changes to the fall protection plan shall be approved by a qualified person. A copy of the site-specific fall protection plan with all approved changes shall be maintained at the job site. The plan shall be under the supervision of a competent person.
    - Alternate fall protection plans must include the specific site address, the reason(s) why standard personal fall protection systems are infeasible and/or create additional hazards as well as specifically what alternative measures will be taken to reduce or eliminate the fall hazard for the employee(s) who cannot be provided with protection from the conventional fall protection systems, such as the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.

- Safety monitoring system involves a second person who is competent in the recognition of fall hazards, remains within sight and vocal range of the at-risk employee(s), and shall have no duties other than monitoring the safety of the at-risk employee(s).
- Controlled Access Zones shall conform to the following provisions:
  - When used to control access to areas where leading edge and other operations are taking place, the controlled access zone shall be defined by a control line or by any other means that restricts access, such as a fence or barricade. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.
  - When control lines are used, they shall be erected not less than 6 feet nor more than 25 feet from the unprotected or leading edge.
  - The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.
  - The control line shall be connected on each side to a standard railing or wall, or securely anchored on each end.
  - Control lines shall consist of ropes, wires, tapes, or equivalent materials, and supporting stanchions as follows:
    - Each line shall be flagged or otherwise clearly marked at not more than 6 foot intervals with high-visibility material.
    - Each line shall be rigged and supported in such a way that its lowest point, which includes sag, is not less than 39 inches from the working level/working area and its highest point is not more than 45 inches.
    - Each line shall have a minimum breaking strength of 200 pounds.
  - Each employee working in a controlled access zone shall be directed to comply promptly with fall hazard warnings from safety monitors.

Fall Protection - Attics

- **Before** any work in an attic begins, check the area you will be walking through and working in for any potential hazards. Some of these hazards include but are not limited to:
  - Exposed nails.
  - Low hanging wires or wires that cross the path you will use to reach the area where you will be working.
  - Low hanging rafters or cross-beams.
  - Hot conditions.
  - Poor lighting.
  - Truss chords hidden by insulation or debris.
  - Rotten or weakened truss chords or ceiling joists.
- If the attic is unfinished and there is not a safe walkway available. Use plywood or planking to create a walkway and standing platform to complete work. If using plywood or planking ensure it is secured to joists by means of screws or nails to avoid movement and/or flipping of the walking/standing surface.
- If the area around the walking/standing surface is not protected by guardrails, then employees must use a fall protection system while walking/working in the space as specified by the Program Administrator and/or job supervisor. **(See Fall Protection for more information.)**
- Never step blindly into insulation assuming a joist or floor decking will be there. If you cannot see the decking, beams or joists, **DO NOT STEP THERE!**
- Don't assume that all joists are on 16-inch centers. 24-inches is more common in new homes.
- Be cautious of beams or joists that might be damaged by termites or rot. They may not hold your weight.
- If you must travel from stable flooring onto joist beams, maintain three points of contact at all times. Move only one foot or hand at a time, keeping your other foot(feet) and hand(s) on a secure joist or rafter.
- **DO NOT** step on pipes or ductwork. They may not hold your weight and could cause you to fall through the drywall below.
- During summer months, schedule attic work for the morning, if possible, before temperatures become too hot in the space.

- Utilize proper clothing and the appropriate Personal Protective Equipment (PPE) as required by the space to protect from fiberglass insulation, nails, hard objects, and possible bites and stings from pests. Below is a list of recommended clothing and PPE which includes but is not limited to:
    - Long-sleeved shirt tucked into pants to protect against scrapes, cuts and exposure to insulation and/or a Tyvek suit which will protect street clothes from contaminates found in unfinished attic spaces.
    - Safety glasses or goggles.
    - Work boots to protect feet from nails or other objects protruding from walking/standing surfaces.
    - Hard hat or at a minimum a cap with a bill to protect the face from falling debris and prevent scrapes from nails/screws sticking through roof sheathing.
    - Disposable gloves and plastic bags to remove any dead animals or birds.
    - Work gloves.
    - Fall protection system, if needed.
    - A disposable NIOSH rated N-95 respirator is the minimal protection needed for short exposures to fiberglass dust in attics. There may be other, jobsite specific, atmospheric exposures that will need to be taken into consideration when determining the correct respirator to use. **CHECK WITH YOUR SUPERVISOR BEFORE STARTING EACH JOB.**
- Disturb insulation as little as possible to avoid stirring up dirt, dust, fibers and mold. Even when wearing a respirator and/or a Tyvek suit, you will want to minimize tracking contaminates down from the attic on clothing.
- If a ladder is used to access an attic, be sure it is set up correctly. **(See Supplemental Documents – Correct Ladder Usage for more information.)** Maintain three points of contact and don't reach for items when ascending/descending the ladder. Try to minimize trips up and down the ladder by planning ahead and making sure all tools and safety equipment needed to complete the task are brought up to the attic in the fewest number of trips as possible.
- Carry loose tools in a tool bag that can be dragged around the space rather than setting tools on rafters and risk having them fall in the insulation. Bring an extra flashlight as a back-up. Even if the attic has a light, the light itself or the bulb can stop working and the flashlight will allow checking areas where the stationary light might not reach.
- Place a drop cloth under the attic access and have a vacuum with a HEPA filter available to vacuum yourself off, if necessary, and to vacuum up any debris that may have fallen through the attic hatch.
- Before beginning any work, check the attic space for pests, i.e., rodents, venomous spiders, stinging insects, bats, etc. If vermin are a problem, the attic will need to be fumigated prior to any workers being allowed in the space.

Fall Protection - Skylights, Awnings & Similar Floor Openings

- **BEFORE any work on a rooftop begins**, a qualified person shall develop a site-specific risk hazard assessment to identify what if any fall protection method(s) are required for the jobsite and work to be performed. **(See Fall Protection for more information.)**
- A floor opening as defined by OSHA is an opening on any walking/working surface that is 12 inches or more in its least dimension through which persons may fall. Protective devices shall be used to prevent falls.
- Employees on walking/working surfaces shall be protected from falling through skylights, awnings and similar floor openings that are 6 feet or more above lower levels by personal fall arrest systems, covers, screens or guardrail systems.
- Employees on a walking/working surface below skylights and similar floor openings shall be protected from objects falling through by covers or screens.
- When a skylight screen is selected for safeguarding the skylight, then the screen must at a minimum be able to withstand a load of at least 200 pounds applied perpendicularly at any one area on the screen. The screen construction shall be of grillwork with openings not more than 4 inches long or slat work with openings not more than 2 inches wide with length unrestricted. Additionally, the screen shall be of such construction and mounting that under ordinary loads or impacts the screen will not deflect downward sufficiently to break the skylight below them.

- When a cover is selected for safeguarding a skylight or similar floor opening, the cover shall be capable of withstanding weight greater than 200 pounds or the weight of employees and/or tools on them. All covers shall have a painted or stenciled sign with at least one-inch high legible letters stating “Opening – Do Not Remove”.
- Employees shall never sit on, lean against, or step on skylight or similar floor opening covers.
- Roof access opening covers when closed shall not latch in a way that prohibits exit.
- In areas where awnings are present and structural support is inadequate, employees shall be protected by a personal fall arrest system and/or a guardrail system that shall display a sign with painted or stenciled legible letters at least one-inch high stating “Danger – No Step”.

Flammable Liquids

- Only OSHA approved containers shall be used when transporting, storing, or when using flammable liquids on the jobsite.
- When flammable liquids are transferred from one container to another, the fill spout, nozzle or fill pipe shall be kept continuously in contact with the edge of the fill opening to prevent the discharge of static sparks.
- Flammable liquids shall be drawn from or transferred into vessels, containers or portable tanks within a building only through a closed piping system, from safety cans, by means of a device drawing through the top or from a container or portable tank by gravity through an approved self-closing valve.
- Transferring any liquids by means of air pressure on the container or portable tank shall be prohibited.
- Flammable liquids shall be kept in closed containers when not actually in use.
- Leakage or spillage of flammable or combustible liquids shall be disposed of promptly and safely.
- Flammable liquids may be used only where there are no open flames or other sources of ignition within the possible path of vapor trail.
- Safety glasses and gloves are to be worn when handling flammable liquids

Forklift - Industrial Trucks

- Every employee who operates or is expected to work around an active industrial truck shall be instructed in the following procedures and in any other practices dictated by the work environment.
- It is a violation of Federal law for anyone **UNDER 18 years of age** to operate a forklift or for anyone OVER 18 years of age who is not properly trained and certified to do so.
- Training shall include formal instruction, practical training and a worksite specific operator evaluation conducted by a qualified instructor with the knowledge and ability to teach and evaluate operators.
- Training content shall include at a minimum: forklift operating instructions, use of controls, and capacity and load stability.
- Refresher training shall be required at any time if an operator has been observed to operate the vehicle in an unsafe manner, has been involved in an accident or near-miss and/or the operator has received an evaluation that they are not operating the truck in a safe manner.
- Employers must also certify that each operator has received the training and been re-evaluated at a minimum of at least once every three years.
- Industrial trucks shall be operated in a safe manner in accordance with the following operational rules:
    - Only drivers authorized by the employer and trained in the safe operations of the pertinent industrial trucks shall be permitted to operate such vehicles.
    - Stunt driving and horseplay are prohibited.
    - No riders shall be permitted on vehicles unless the vehicle is specifically designed to accommodate more than one person.
    - When provided by the industrial truck manufacturer, an operator restraint system such as a seat belt shall be used.
    - Employees shall not ride on the forks of lift trucks.
    - Employees shall not place any part of their bodies outside the running lines of an industrial truck or between mast uprights or other parts of the truck where shear or crushing hazards exist.
    - Employees shall not be allowed to stand, pass, or work under the elevated portion of any industrial truck, loaded or empty, unless it is effectively blocked to prevent it from falling.
    - Drivers shall check the vehicle prior to operation each day or if the forklift is used on a round-the-clock basis, it shall be examined after each shift. If it is found to be unsafe, it will be reported to management (site or company) to be removed from service until it has been made safe.
    - No truck shall be operated with a leak in the fuel system.

- A loaded vehicle shall not be moved until the load is safe and secure. This includes ensuring vehicles are not loaded beyond designated capacity.
- Vehicles shall not exceed the authorized or safe speed, always maintain a safe distance from other vehicles, always keep the truck under positive control and all established traffic regulations shall be observed.
- Industrial trucks traveling in the same direction shall not be passed at intersections, blind spots, or dangerous locations.
- The driver shall slow down and sound the horn at cross-aisles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
- The operator shall use a spotter(s) if the load must be carried forward or if there is not a clear view.
- Operators shall look in the direction of travel and shall not move a vehicle until certain that all persons/obstacles are clear.
- Trucks shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the truck and object.
- Grades shall be ascended or descended slowly. When ascending/descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.
- On all grades, the load and load engaging means shall be tilted back if applicable and raised only as far as necessary to clear the road surface.
- The forks shall always be carried as low as possible, consistent with safe operations.
- When leaving a vehicle unattended (the operator is away from the vehicle 25 feet or more, or the vehicle is not in view) the controls shall be placed in the neutral position, the mast is brought to the vertical position, the forks are fully lowered, the brakes are set, and the power shall be turned off. Wheels shall be blocked if the truck is parked on an incline.
- When leaving a vehicle unattended (the operator is away from the vehicle 25 feet or less and the vehicle is still in view) the controls shall be placed in the neutral position, the mast is brought to the vertical position, the forks are fully lowered, and the brakes are set. It is not required that the power be turned off.
    - EXCEPTION: Forks on fork-equipped industrial trucks may be in the raised position for loading and unloading if the forks are raised no more than 42 inches above the level where the operator/loaders are standing, and controls are placed in neutral, the brakes are set, and the power is turned off. If on an incline, the wheels shall be blocked.
- Vehicles shall not be run onto any elevator unless the driver is specifically authorized to do so. Before entering an elevator, the driver shall determine that the capacity of the elevator will not be exceeded. Once on an elevator, the industrial truck's power shall be shut off and the brakes set.
- Motorized hand trucks shall enter elevators or other confined areas with the load end forward.
- Vehicles shall not be operated on floors, sidewalk doors, or platforms that will not safely support the loaded vehicle.
- Prior to driving onto trucks, trailers, and railroad cars, their flooring shall be checked for breaks and other structural weaknesses.
- Vehicles shall not be driven in and out of highway trucks and trailers at loading docks until such trucks or trailers are securely blocked or restrained and the brakes set.
- To prevent railroad cars from moving during loading or unloading operations the car brakes shall be set, wheel chocks or other recognized positive stops used, and blue flags or blue lights displayed.
- The width of one tire on the powered industrial truck shall be the minimum distance maintained from the edge by the truck while it is on any elevated dock, platform, freight car, or truck.
- Tilting forward with the load engaging means while the load is elevated shall be prohibited except when picking up a load. Elevated loads shall not be tilted forward except when the load is being deposited onto a storage rack or equivalent. When stacking or tiering, backward tilt shall be limited to that necessary to stabilize the load.
- Special precautions shall be taken in the securing and handling of loads by trucks equipped with attachments, and during the operation of these trucks after the loads have been removed.
- When powered industrial trucks are used to open and close doors, the following provisions shall be complied with:

        - A device specifically designed for opening or closing doors shall be attached to the truck.
        - The force applied by the device to the door shall be applied parallel to the direction of travel of the door.
        - The entire door opening operation shall be in full view of the operator.
        - The truck operator and other employees shall be clear of the area where the door might fall while being opened.
- No repairs shall be performed on any industrial truck until arrangements have been made to reduce the probability of injury to repairmen or others caused by sudden movement or operation of such equipment or its parts.
- Major modifications and structural changes to high lift trucks, industrial trucks and rider trucks that affect the capacity and safe handling of the vehicles shall not be performed by the employer or user without prior written approval from the manufacturer unless modification is designed, manufactured, and installed in accordance with recognized good engineering and manufacturing principles. The capacity, operation and maintenance instruction plates shall be changed accordingly.
- Powered industrial trucks shall not be operated in atmospheres containing more than 20% of the Lower Explosive Limit of flammable gas or vapor unless approved for the area as provided by a competent evaluator.
- Trailers disconnected from their truck shall be secured to prevent them from up-ending during loading or unloading operations. This may require utilization of auxiliary jacks designed for that purpose.
- Industrial trucks shall not be operated in areas that expose the operator to the hazard of collision with overhead obstructions unless the truck is equipped with overhead guards.
- Loads of excessive width, length or height shall be so balanced, braced, and secured as to prevent tipping/falling.
- Counterweights shall be so affixed that they cannot be accidentally dislodged.
- Forks, fork extensions and other attachments shall be secured so that they cannot be inadvertently dislodged and shall be used only in accordance with the manufacturer's recommendations.

Gas or Diesel Machinery

- Machinery and equipment shall not be used or operated under conditions of speeds, stresses or loads which endanger employees.
- Machinery and equipment with defective parts which create a hazard shall not be used.
- Machinery and equipment in service shall be maintained in a safe operating condition.
- Only qualified persons shall be permitted to maintain or repair machinery and equipment.

General Work Environment – Indoor/Outdoor

- No employee shall be permitted to work from, stand or walk on any surface that is not rated for such live loading by the building's engineer of record and/or a building official.
- All safety devices and parts of such equipment, including related building support structures, shall be inspected, and where necessary, tested to determine if they are safe to use.
- No person shall engage in the smoking of tobacco products in an enclosed space that are a structural part of the building at a place of employment. This includes lobbies, lounges, waiting areas, elevators, stairwells and restrooms.
- Food and beverages shall not be stored or consumed in any area where they may be contaminated by any toxic material; including bathrooms.
- All sweepings, putrescible wastes, refuse and garbage shall be removed in such a manner as to avoid creating a nuisance and shall be removed as often as necessary to avoid creating a menace to health through the development of unsanitary conditions.
- Cleaning and sweeping shall be done in such a manner as to minimize the contamination of the air and insofar as is practicable, shall be performed at such time and in such a manner that will avoid harmful exposure.
- Employees shall be safeguarded by means of face or eye protection when working in locations where there is an inherent risk of receiving eye injuries such as:
    - punctures, abrasions, contusions or burns due to contact with flying particles.
    - hazardous substances.
    - projections or injurious light rays.
- Suitable screens or shields isolating the hazardous exposure may be considered adequate safeguarding for nearby employees.
- The dipping or pouring of drinking water from containers, such as from barrels, pails or tanks is prohibited regardless of whether the containers are fitted with covers.

- The common use of a cup, glass or other vessel for drinking purposes is prohibited.
- Non-potable water shall not be used for drinking, washing or bathing, food preparation/cooking, dishwashing or processing premises, or other personal service rooms.

General Work Environment - Warehouse

- Material, whenever stored, shall not create a hazard.
- It shall be limited in height and shall be piled, stacked, or racked in a manner designed to prevent it from tipping, falling, collapsing, rolling, or spreading.
- Racks, bins, planks, sleepers, bars, strips, blocks, or sheets, shall be used where necessary to make the piles stable.
- Exits shall always be properly/visibly labeled and clear pathways maintained.
- All employees working in a warehouse environment shall be informed of the location of fire equipment and any site-specific fire protection/prevention procedures.
- Good housekeeping practices shall be followed at all times. Equipment and materials shall be put away when not in use, and floors and shelving shall be kept free of trash and debris.

Grinder/Abrasive Wheels

- Portable grinders shall not be used as bench grinders unless they are securely clamped in place, have ample clearance between the wheels and the bench, and are equipped with standard wheel and arbor end-guards and tool rests.
- "C" clamps shall not be used to secure grinders to benches.
- Special band clamps or other equivalent means shall be used which encircle the machine and are secured by means of bolts.
- No wheels, discs, straps or belts shall be operated in such a manner and in such a direction as to cause the dust and dirt particles to be thrown into the operator's breathing zone.
- Safety glasses are to be worn when the machine is in operation.

Ground Fault Circuit Interrupter (GFCI)

- A competent person as defined by OSHA 1926.32(f) shall oversee the implementation of the GFCI program.
- Gering Valley Plumbing & Heating, Inc. always utilizes Ground Fault Circuit Interrupters (GFCI) in all applicable company owned extensions cords, junction boxes, and circuit breakers. All cords and equipment shall be inspected daily before use for external defects and for indications of possible internal damage. Any defective cords or equipment shall be removed from service and marked defective until repairs are made.
- Any cords or equipment which has not met the requirements of this program shall not be used.
- All equipment grounding conductors shall be tested by a qualified person for continuity and shall be electrically continuous.
- Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductors.
- The equipment grounding conductor shall be connected properly to its terminal as stated by the following:
    - Before each use.
    - Before equipment is returned to service following any repairs.
    - Before equipment is used such as when a cord has been run over.
    - At intervals not to exceed 3 months.
    - Cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.
- Tests performed shall be recorded as to the identity of each receptacle, cord set, and cord and plug connected equipment, that passed the test and shall indicate the last date tested or interval for which it was tested. This record shall be kept by means of logs, color coding or other effective means and shall be maintained until replaced by a more current record. These records shall be made available on job sites, for equipment being used, for any affected employees to review.
- GFCI's required in any junctions, outlets, or equipment provided on a job site is the responsibility of the General Contractor or property owner.
- Employees are responsible for evaluating each electrical situation and address any absence of required GFCI with the property owner, general contractor, or their supervisor.

Hand and Portable Jacks

- In the absence of a firm foundation, the base of the jack shall be blocked.

- If there is a possibility of slippage of the cap, a block shall be placed between the cap and the load.
- Employees shall not enter the zone beneath a jack supported load unless it has been effectively blocked or cribbed.
- Gloves are to be worn.

Ladders - Portable Metal & Wooden

- Only ladders meeting applicable OSHA/ANSI specifications shall be utilized, and load capacity shall not be exceeded.
- Before use, ladders shall be inspected for wearing or cracking that might cause a safety concern. Ladders determined to be unsafe shall be clearly tagged and removed from service to prevent use until properly disposed of.
- When reasonably possible, ladders shall extend a minimum of 3' above top of upper landing surface. When it is not possible for the ladder to extend 3' above the top of the upper landing surface, the ladder shall be secured at its top to a rigid support that will not deflect when the ladder is in use and a grabrail shall be provided.
- Extension ladders shall be placed utilizing at least a vertical/horizontal incline ratio of 4:1 and the base shall be secured from moving and falling.
- Employees shall be prohibited from carrying equipment or materials which prevent the safe use of ladders. 3-point contact shall always be maintained.
- Employees shall be required to face the ladder when ascending and descending.
- Employees shall always use both hands when climbing up or down the ladder.
- Employees shall not stand on the top cap or the step immediately below the top cap of a stepladder.
- The ladder shall be so placed as to prevent slipping, or it shall be lashed, or held in position.
- Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.
- Portable ladders shall be so placed that the side rails have a secure footing.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder.
- The top rest for portable rung and cleat ladders shall be reasonably rigid and shall have ample strength to support the applied load.
- Ladders shall not be used as a brace, skid, guy, or gin pole, gangway, or for other uses than that for which they were intended.
    - EXCEPTION: Manufacturer suggested alternative uses.
- Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
- Cross-bracing on the rear section of step ladders shall not be used for climbing unless the ladders provide steps for climbing on both front and rear sections.
- Rungs shall be kept free of grease and oil.
- Ladders set up around overhead lines or other electrical systems shall have non-conductive side rails.
- Never allow more than one person on a ladder at a time unless the ladder is designed specifically for multiple workers.

Lead Awareness

- Lead is highly toxic and can cause damage to the brain, kidney, reproductive system, etc. Workers should seek immediate medical attention if suffering from symptoms of lead poisoning. Early symptoms include headaches, fatigue, stomach problems and loss of sleep.
- Lead poisoning occurs through ingestion or inhalation even at a very low level of exposure. Lead can be carried on employees' bodies, shoes or clothing which can create a risk of lead exposure to their families, especially young children.
- Employer shall provide Lead Awareness Training for each employee who has a potential for lead exposure at initial hire and/or before working at a site where lead is suspected. Annual training shall be conducted thereafter.
- Training shall cover lead hazards and how the employee can protect themselves including but not limited to the following:
    - Nature of the operations – scraping, demolition, etc.
    - Respiratory protection – choosing the correct respirator for the task, respirator use, etc.
    - Medical surveillance and removal if needed.

    - Engineering controls – vacuum with HEPA filter, etc.
    - Good work practices – eat in area free of lead, washing hands/face before leaving worksite, etc.
    - Let employees know of their right to their records.
    - Let employees know that they will be notified in writing of any blood-lead test results (if applicable) within 5 days of receiving the results.
- Training shall be documented and must include dates of training, name of trainer, and employee name.
- **Before any work begins**, site specific lead hazard training shall be conducted.
- Lead can be present in a wide range of materials including paints and other coatings which may be present on steel structures and pipe fixtures. Other possible exposure may come from lead mortars and base metals to be welded on or treated with abrasive blasting, soft solder, roofs, tank linings, electrical conduits and demolition/salvage materials to name a few.
- Tasks that may create a risk to lead exposure for employees includes but is not limited to the following:
    - Demolition or salvage of structures where lead or materials containing lead are present.
    - Removal or encapsulation of materials containing lead.
    - New construction, alteration, repair or renovation of structures or parts of structures that contain lead or materials containing lead.
    - Installation of products containing lead.
    - Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location where construction activities are performed.
    - Maintenance operations associated with the construction activities listed above.
- Where lead is suspected, **before beginning any work**, employers shall send samples of materials to a laboratory accredited by the US EPA National Lead Laboratory Accreditation Program for lead analysis and/or air monitoring shall be initiated.
- If initial air monitoring is above the action level, monitoring shall be conducted every six months until two consecutive results are below the action level.
- Employees shall be notified in writing of the air monitoring results and, if applicable, the corrective actions taken to reduce exposure to or below the PEL.
- For each task that places an employee at risk for lead exposure at or above the Action Level (30 micrograms per cubic meter of air calculated on an 8-hour time-weighted average), employers shall assess the amounts of respiratory lead exposure for each task. This will be accomplished through air sampling and the results shall be used to determine the protective measures needed as well as the type of respirator that must be worn for protection.
- Employers shall ensure that no employee is exposed to lead at concentrations greater than the permissible exposure limit of 50 micrograms per cubic meter of air averaged over an 8-hour period by reducing and maintaining lead levels as low as possible by:
    - Housekeeping – lead dust on surfaces, especially in eating areas, shall be controlled by using a vacuum with a HEPA filter, wet clean-up, or other effective means.
    - Washing facilities – employees must have washing facilities with soap and clean water.
- For certain highly hazardous tasks, called trigger tasks, employers shall implement special protective measures until the employer determines that employee airborne exposures to lead are below PEL levels. These measures include the following:
    - The appropriate respirator for the task assigned.
    - Protective clothing and equipment.
    - Areas for changing clothes and facilities for hand washing.
    - Blood test for lead and zinc protoporphyrin (ZPP)
    - Basic lead hazard, respirator, and safety training.
- Blood tests shall be conducted every 6 months until two consecutive blood samples and analysis are acceptable. Blood sampling and monitoring shall be performed at least monthly during the removal period. Any employee found to have elevated blood levels shall be temporarily removed from tasks that are a potential for lead exposure. Employees shall be notified in writing within five days when lead levels are not acceptable.
- For employees exposed to lead above the PEL, employers shall develop and implement a written worker protection program that at a minimum should include:
    - Hazard determination, including exposure assessment.
    - Medical surveillance and provisions for medical removal.

    - Job and/or site-specific compliance programs.
    - Engineering and work practice controls.
    - Respiratory protection.
    - Protective clothing and equipment.
    - Good housekeeping practices.
    - Hygiene facilities and practices – for changing clothes and showering.
    - Separate eating areas located away from the worksite.
    - Posting of warning signs in and around the regulated work area.
    - Employee information and training.
    - Record keeping.
- A medical surveillance program shall be developed for all employees who are or may be exposed at or above the action level for more than 30 days.
- Employers shall establish and implement a written site-specific compliance program that shall reduce employee lead exposure to the PEL or below. The compliance program must provide for frequent and regular inspections of job sites, materials, and equipment, by a competent person.
- Written programs shall be reviewed and updated at least every 6 months and must include:
    - A description of each activity in which lead is emitted.
    - The means used to achieve compliance and engineering plans used to determine the engineering controls selected where required.
    - Information on equipment used to meet the PEL.
    - Air monitoring data that documents the source of lead emissions.
    - A detailed schedule for implementing the program with copies of documentation, such as purchase orders for equipment, construction contracts, etc.
    - A work practice program.
    - An administrative control schedule, if applicable.
    - Arrangements made among contractors on multi-contractor sites to inform employees of potential lead exposure.
- Employees shall avoid disturbing any lead containing materials whenever possible.
- Employees shall abide by any signs, labels, or assessment reports indicating the presence of lead containing materials and follow established company guidelines to prevent these materials from being disturbed.
- If any lead-based substance is disturbed via sanding, cutting, burning, welding, etc. it can become an airborne toxin.
- Appropriate PPE shall always be used when working near or on lead containing materials such as:
    - Respirators.
    - Protective clothing.
    - Gloves.
    - Use of protective equipment.
- After potential exposure, workers will immediately wash any exposed skin areas. **DO NOT** attempt to brush off lead contaminates. This can result in an increase of airborne exposure risks. If employee's clothing becomes contaminated, they should change prior to leaving the worksite, place the contaminated clothing in sealed bags to prevent cross contamination and have the clothes washed as soon as possible.

Lifting Procedures

- All employees will be trained in proper lifting techniques and practices as required by OSHA.
- Before manual lifting is performed, a hazard assessment must be completed. The assessment must consider size, bulk, and weight of the object(s) to determine what style of lifting should be performed.
- If it is determined during the assessment that mechanical equipment is required, or a two-man lift is best, vision must not be obscured while object(s) are being carried. This includes the walking surfaces and other paths that object(s) will be moved through.
- To avoid musculoskeletal injuries, training for safe lifting should include general principles for ergonomics, recognition of hazards and injuries, and methods and procedures for early reporting of injuries.
- Additional trainings will be given on certain job specific lifting, hazards, and controls, as these could be different than industry standard lifting practices and controls.

- In case of injuries caused by improper lifting, those injuries must be documented and investigated. Incorporation of investigative findings into work procedures must be accomplished to prevent future injuries.
- Remember, when the use of lifting equipment is impractical, or not possible, two-man lifts must be used.
- Supervisors must periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries. New operations should be evaluated to eliminate hazards before work processes are implemented.
- Manual lifting equipment such as dollies, hand trucks, lift assisted devices, jacks, carts, and hoists must be provided for employees.
- Other engineering controls such as conveyors, lift tables, and work station design should be considered.
- Manual lifting equipment should be used instead of manual lifting whenever possible. Supervisors should enforce the use of lifting equipment.

Low-Voltage Electrical Systems

- A qualified person as defined by OSHA 1910.333(c)(2) is a person capable of working safely on energized circuits and is familiar with the proper use of special precautionary techniques, i.e., personal protective equipment, insulated tools, test equipment, insulating and shielding materials and utilization of ground fault circuit interrupters. **(See GFCI for further information.)** Per NFPA-70E a person can be considered qualified with respect to certain equipment and methods, but still be unqualified for others.
- Employees performing electrical work shall be trained in electrical safety-related work practices that pertain to their respective job assignments. All employees shall be trained in electrically related safety practices and clearance distances that pertain to their assigned task(s) and which are necessary for their safety.
- **Before any work begins**, a qualified person shall use test equipment to test circuit elements and electrical parts of equipment to which employees will be exposed and verify that the circuit elements and equipment parts are de-energized.
- No employee shall enter a space containing exposed electrical parts unless adequate illumination is provided that enables employees to work safely.
- All electrical equipment and systems shall be treated as energized until tested or otherwise proven to be de-energized.
- Live electrical parts shall be de-energized before an employee works on or near them, unless the employer can demonstrate that de-energizing the live electrical part introduces additional or increased hazards or is not feasible due to equipment design or operational limitations.
- Live parts that operate at less than 50 volts to ground need not be de-energized if there will be no increased exposure to electrical burns or to explosion due to electric arcs.
- Test instruments, equipment, and their accessories shall meet the requirements of ANSI/ISA-61010-1-Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use-Part 1 General Requirements for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems 1000V and below.
- When test instruments are used for the testing of the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument shall be verified before and after an absence of voltage on conductors or circuit parts operating at 50 volts or more is performed.
- When test instruments are used to test for the absence of voltage on circuit parts operating at 600 volts or more, the test instrument shall be checked for proper operation immediately after use.
- The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage backfeed.
- A qualified person shall be responsible for the following before working on de-energized electrical equipment or systems, unless the equipment is physically removed from the wiring system:
    - Notifying all involved personnel.
    - Locking the disconnecting means in the "open" position with the use of lockable devices, such as padlocks, combination locks or disconnecting of the conductor(s) or other positive methods or procedures which will effectively prevent unexpected or inadvertent energizing of a designated circuit, equipment or appliance. EXCEPTION: Locking is not required where tagging procedures are used and where the disconnecting means is accessible only to personnel instructed in these tagging procedures.
    - Tagging the disconnecting means with suitable accident prevention tags.

    - Effectively blocking the operation or dissipating the energy of all stored energy devices which present a hazard, such as capacitors or pneumatic, spring-loaded and like mechanisms.
- A qualified person shall be responsible for the following before energizing equipment or systems which have been de-energized:
    - Determining that all persons are clear from hazards resulting from equipment/systems being energized.
    - Removing locking devices and tags. Locking devices and tags may only be removed by the employee who placed them. EXCEPTION: If original employee has left the premises or is otherwise unavailable, other persons may be authorized by the employer to remove locking devices and tags.
- Work on energized electrical conductors or circuit parts that are not placed in an electrically safe work condition shall be considered energized electrical work and shall be performed by written permit only. **(See Lock-Out / Block-Out Program for further information.)**
- Suitable temporary barriers, or barricades, shall be installed when access to opened enclosures containing exposed energized electrical equipment is not under the control of an authorized person.
- Conductive measuring tapes, ropes, or similar measuring devices shall not be used when working on or near exposed energized conductors or parts of equipment.
- Conductive fish tapes shall not be used in raceways entering enclosures containing exposed energized parts unless such parts are isolated by suitable barriers. Only qualified persons shall work on electrical equipment or systems.
- Only qualified persons shall be permitted to perform any function in proximity to energized overhead conductors unless means to prevent accidental contact have been provided.
- Work shall not be performed on exposed energized parts of equipment or systems until the following conditions are met:
    - The employer has determined that the work is to be performed while the equipment or systems are energized.
    - Involved personnel have received instructions on the work techniques and hazards involved in working on energized equipment.
    - Suitable personal protective equipment and safeguards (i.e., approved insulated gloves or tools and protective shields or barriers) are provided at no cost to the employee and shall be used where necessary. EXCEPTION: the use of approved insulating gloves or tools or other protective measures are not required when working on exposed parts of equipment or systems energized at less than 50 volts provided a conclusive determination has been made prior to the start of work by a qualified person that there will be no employee exposure to electrical shock, electrical burns or hazards due to arcing.
    - Approved insulated gloves shall be worn for voltages more than 250 volts to ground.
    - Suitable barriers or approved insulating material shall be provided and used to prevent accidental contact with energized parts.
    - Suitable eye protection shall be provided and utilized.
    - Proper illumination is provided in active work areas.
    - Removal of obstructions that prevent direct observation of the work to be performed.
    - When working in a confined space or enclosed space, such as a manhole or vault, the employer shall provide protective shields, protective barriers, or insulating materials as necessary to avoid inadvertent contact with these parts. Doors, hinged panels, and the like shall be secured to prevent them from swinging into employees and causing employees to contact exposed energized parts. (**See Confined Space Program for further information.)**
- Where required for personnel protection, suitable barricades, tags or signs shall be used.
- After the required work on an energized electrical part or system has been completed, a qualified person shall be responsible for removing from the work area any temporary PPE and reinstalling all permanent barriers or covers.
- When work is performed near overhead lines, a minimum distance of 10’ shall be maintained or the lines shall be de-energized and grounded, or other protective measures shall be provided before work begins.
- When a qualified person is working near energized overhead lines, whether on the ground or in an elevated position, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts as shown in OSHA 1910.333(c)(3)(ii)(C) Table S-5, ranges shown below:
    - 300V and less – avoid contact.
    - Over 300V, not over 750V – 1’0”.
    - Over 750V, not over 2kV – 1’6’’.
    - Over 2kV, not over 15kV – 2’0”.

    - Over 15kv, not over 37kV – 3’0”.
    - Over 37kV, not over 87.5kV – 3’6”.
    - Over 87.5kV, not over 121kV – 4’0”.
    - Over 121kV, not over 140kV – 4’6”.
- When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object the person is in contact with cannot come closer to any unguarded energized overhead line than the following distances:
    - For voltages to ground 50kV or below – 10’.
    - For voltages to ground over 50kV – 10’ plus 4 inches for every 10kV over 50kV.
- Conductive materials and equipment that are in contact with any part of an employee’s body shall be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects, such as ducts or pipes, in areas with exposed live parts, the employer shall institute work practices, such as the use of insulation, guarding, and material handling techniques, which will minimize the hazard.
- Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a minimum clearance of 10’ is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4” for every 10kV over that voltage.
- Portable ladders shall have non-conductive side rails if they are used where the employee or the ladder could contact exposed energized parts.
- Employees shall not wear conductive items of jewelry or clothing unless they are rendered non-conductive by covering, wrapping or other insulating means.

Low-Voltage Electrical Systems – Arc Flash & Limited Approach Boundary

- Additional training will be given to those that are allowed to establish and/or work within the Limited Approach Boundary as defined by NFPA 70.
    - NFPA 70 defines Limited Approach Boundary as a shock protection boundary to be crossed by only qualified persons (at a distance from a live part), which is not to be crossed by unqualified persons unless they are escorted by one who is qualified, or the conductors and equipment involved are placed in an electrically safe work condition.
- Only qualified employees may work on and in areas containing unguarded, exposed energized lines or parts of equipment operating at 50 volts or more.
- The qualified person must submit a documented plan justifying the need to enter the limited approach boundary prior to work being performed.
- A worksite specific briefing shall be held with all at risk employees before starting any work. This briefing shall include any hazards associated with the job, special precautions to be used, energy source controls, work procedures involved, PPE requirements and pertinent information on the energized electrical work permit. Additional briefings shall be held if changes occur during the course of the work that might affect the safety of employees.
- The employer shall ensure that each employee, to the extent that other safety-related conditions at the worksite permit, works in a position from which a slip or shock will not bring the employee’s body into contact with exposed, uninsulated parts energized at a potential different from the employee’s.
- Employees of Gering Valley Plumbing & Heating, Inc. while working on host employer property shall abide by the established minimum approach distances and shall obtain incident heat energy calculations of existing equipment they will be working on from the client.
- Only a qualified person shall be allowed to perform the following tasks: testing, troubleshooting, and voltage measuring on electrical equipment operating at voltages equal to or greater than 50 volts.
- Electric lines and equipment shall be considered and treated as energized unless they have been de-energized in accordance with 1926.961.
- A written permit shall be obtained before work on energized electrical conductors or circuit parts that cannot be placed in an electrically safe work condition.
- Electrical conductors and circuit parts operating at less than 50v shall not be required to be de-energized if it is determined that there will be no increased exposure to electrical burns or explosion.
- Employees shall be trained in the skills and techniques to:
    - Distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment.

    - To determine the nominal voltage of exposed energized electrical conductors and circuit parts.
    - The approach distances specified in NFPA Tables 130.4(D)(a) for AC systems and 130.4 (D)(b) for DC systems and the decision-making process necessary to determine the degree and the extent of the hazard and the personal protective equipment and job planning necessary to perform the task(s) safely.
    - Identify and understand the relationship between electrical hazards and possible injury.
- Retraining shall be performed at intervals not to exceed three years.
- An employee shall receive additional training (or retraining) under any of the following circumstances:
    - If the supervisor or annual inspections indicate that the employee is not complying with the safety-related work practices.
    - If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those that the employee would normally use.
    - If he or she must employ safety-related work practices that are not normally used during his or her regular job duties.
- Employees at risk of specific job-related electrical shock hazards shall be trained in electrical safety practices and procedures related to each job assignment. Examples of this include testing, troubleshooting, work permits, arc flash hazard analysis and voltage measuring within the Limited Approach Boundary.
- Trainings shall be documented with the employee's name, instructor's name, scope of the training covered and date of the training. Training records shall be maintained for the duration of the employee's employment.
- If doing contract work, the site supervisor will advise the host employer of any hazards presented by their work. Hazards encountered during the course of the work and corrective measures taken shall be brought to the attention of the host employer.
- **Before** a worker can approach an exposed electrical conductor and/or circuit part(s) that have not been placed in a safe working condition, a flash hazard risk assessment must be performed. The assessment should document the following:
    - The level of safe practices employed, such as, severity, frequency, probability, and avoidance, to reduce risk to the worker.
    - Identify any hazards, assess risks, and implement risk reduction control measures.
    - These measures place the elimination of a hazard(s) as the first method of control, with use of personal protection equipment as the last option of risk control if no other alternative control measures are available.
- The arc flash hazard risk assessment analysis should determine the arc flash protection boundary requirements, the farthest established boundary from the energy source, the elimination of any hazard(s) present, if possible, and the level of personal protective equipment that shall be worn by the employee to reduce the risk of electric shock.
- The arc flash risk assessment must be documented, and equipment field marked with a label. The assessment must be reviewed at a minimum of every 5 years if the incident energy analysis method is used in the assessment.
- The arc flash protection boundary is calculated using a formula based on voltage, the available fault current and the tripping characteristics of the upstream protective device. The distance of the arc flash protection boundary from the arc source may vary from equipment to equipment.
- A qualified person must know that the NFPA 70E establishes the default flash protection boundary at 4 feet for low voltage (< 600v) systems based on the clearing times of 0.1 second and the available bolted fault current of 50kA or any combination not exceeding 5000 amperes-seconds.
- A qualified person should also know that at voltage levels above 600 volts, the flash protection boundary is the distance at which the incident energy equals 1.2 cal/cm^2. For instances where the fault-clearing time is 0.1 seconds or faster, the flash protection boundary is the distance at which the incident energy level equals 1.5 cal/cm^2.
- Test instruments, equipment and their accessories shall meet the requirements of ANSI/ISA-61010-1-Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use-Part 1 General Requirements, for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems, 1000v and below.

- When test instruments are used for the testing of absence of voltage on conductors or circuit parts operating at 50v or more, the operation of the test instrument shall be verified before and after an absence of voltage test is performed.
- Each employee exposed to hazards from electric arcs shall wear protective clothing and other protective equipment with an arc rating greater than or equal to the heat energy estimated.
- All insulating tools, equipment and PPE shall be inspected daily prior to use and immediately following any incident that is suspected of having caused damage. Insulating gloves shall be given an air test along with the inspection.
- Maximum test intervals for rubber insulating PPE shall be:
    - Blankets – before first issue and annually thereafter.
    - Gloves – before first issue and every 6 months thereafter.
    - Sleeves – before first issue and annually thereafter.
    - Covers and line hose shall be tested if insulating value is suspect.
- All PPE used to protect employees from electric shock shall meet and comply with requirements found in applicable laws and regulations.
- Safety signs, tags, barricades, and attendants, shall be used to alert employees of potential hazards. Barricades shall only be used in conjunction with safety signs and never by themselves.
- All safety signs shall meet applicable state, federal or local codes and standards requirements.
- Any alerting technique used shall not increase the potential for employee injury.
- Each employee exposed to flame and/or electric arcs shall wear or be allowed to reasonably alter apparel that will not increase the extent of injury that would be sustained by the employee.
- When an employee performs work within reaching distance of exposed energized parts of equipment, the employer shall ensure that the employee removes or renders nonconductive all exposed conductive articles, such as keychains or watch chains, rings, or wrist watches or bands, unless such articles do not increase the hazards associated with contact with the energized parts.
- Conductive articles of jewelry and clothing (such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear or metal frame glasses) shall not be worn where they present an electrical contact hazard with exposed live parts as this can cause life threatening conditions. However, such articles may be worn if they are rendered nonconductive by covering, wrapping, or other insulating means.
- Each employee who is exposed to hazards from flames or electric arcs shall not wear clothing that could melt onto his or her skin or that could ignite and continue to burn when exposed to flames or the heat energy.
- A qualified person should know that conductive materials, tools and equipment that are in contact with any part of an employee's body shall be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include, but are not limited to, ducts, pipes, hose, rope, steel tapes, pulling lines and chains.
- Where live parts present an electrical contact hazard, employees shall not perform housekeeping duties inside the Limited Approach Boundary where there is a possibility of contact, unless adequate safeguards are provided to prevent contact. Conductive cleaning materials, e.g., steel wool, metalized cloth, silicon carbide and conductive liquid solutions shall not be used inside the Limited Approach Boundary unless procedures to prevent electrical contact are followed.
- Employees shall not enter spaces containing electrical hazards unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed, employees shall not perform any task within the Limited Approach Boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.
- An annual audit shall be performed to ensure the requirements in the written program are being performed by all employees at risk for electric shock. The written program shall be updated if it is determined that employees are not following it, or another potential hazardous exposure is identified.

Personal Protective Equipment (PPE)

- The Program Administrator shall evaluate each job type and individual site to determine if hazards are present or are likely to be present, which necessitate the use of PPE and a hazard assessment completed. If such hazards are present, or likely to be present, the employer shall:

    - Select, and have each affected employee use, the types of PPE that will protect the affected employee(s) from the hazards identified in the hazard assessment.
    - Communicate selection decisions to each affected employee.
    - Select PPE that properly fits each affected employee.
- The employer shall verify that the required site-specific workplace hazard assessment has been performed through a written certification that identifies the document as a certification of hazard assessment by the following:
    - Workplace evaluated.
    - Name of the person certifying that the evaluation has been performed.
    - The date(s) of the hazard assessment.
- **All** employees shall be required to wear the appropriate PPE identified for the job/site they are assigned. **No exceptions will be allowed.**
- Before using any PPE, employees are required to ensure it is properly fitted to them and free from excessive wear and tear or damage.
- Employees who identify missing, inadequate, or defective PPE shall stop all work until all necessary PPE is acquired and the job can be completed safely.
- PPE shall be provided by the employer for any/all job assignments and for any recognized safety risk to which employees are exposed.
- Employees shall be trained in the correct selection of PPE for the task assigned. The employee shall be trained in the location, use, and care of all PPE required to complete their assigned task.
- Where employees provide their own PPE, the employer shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.
- All PPE shall be maintained in a sanitary and damage free condition.
- All insulating PPE must be inspected before each day's use and immediately following any incident that can reasonably be suspected of having caused damage.
- Any PPE determined to be defective shall be tagged and removed/discarded from service.
- Any/all required training for provided PPE will be conducted upon hiring, when safety situations on the job change, and at a minimum, on an annual basis.
- The employer shall conduct retraining on provided PPE of any employee(s) when there is reason to believe that the employee(s) who has already been trained does not have the understanding and skill required. Circumstances where retraining is required include but are not limited to:
    - Changes in the workplace render previous training obsolete.
    - Changes in the types of PPE to be used render previous training obsolete.
    - Inadequacies in an affected employee's knowledge or use of assigned PPE indicates that the employee has not retained the requisite understanding or skill.
- All training records will be maintained by the Program Administrator and kept on file for a minimum of 3 years.

Pneumatic Machinery

- Machinery and equipment shall not be used or operated under conditions of speeds, stresses or loads which endanger employees.
- Machinery and equipment with defective parts which create a hazard shall not be used.
- Machinery and equipment in service shall be maintained in a safe operating condition.
- Only qualified persons shall be permitted to maintain or repair machinery and equipment.
- Safety glasses and gloves are to be worn when operating pneumatic machinery.

Power-Operated Hand Tools

- All tools shall be restricted to the use for which they are intended and used with any/all appropriate PPE required.
- All tools shall be maintained in a safe condition and inspected prior to use. Manufacturer provided guards shall be in place and operable while the tool is in use. Guards shall not be manipulated in such a way as to compromise its integrity and the protection in which it was intended. Guards shall meet the requirements set forth in ANSI B15.1.
- Tools determined to be unsafe shall not be used and removed from the worksite and turned into the site supervisor/manager for proper tagging and/or disabling.
- Electric Power-Operated Tools:
    - The use of electric cords for hoisting or lowering tools shall not be permitted.
    - Electrical cords shall be visually inspected before each use.
    - All electric power-operated tools shall be plugged into available site GFCIs.

- Pneumatic Power Tools:
    - All the hose connections including the one at the tool shall be secured by some positive means to prevent accidental disconnection unless a suitable ball check device or equivalent is provided at the air source.
    - The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
    - The use of hoses for hoisting or lowering tools shall not be permitted.
- Hydraulic Power Tools:
    - The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.
- Safety glasses and gloves are to be worn.

Scaffolds

- Site and equipment specific training shall be provided for all employees working on scaffolding prior to beginning a work assignment.
- Training shall be conducted by a competent person designated by the Program Administrator to include:
    - The nature of any electrical hazards, fall hazards, and falling object hazards.
    - The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
    - The proper use of the scaffold, and the proper handling of materials on the scaffold.
    - The maximum intended load and the load-carrying capacities of the scaffolds used.
    - Any other pertinent requirements of the Regulation.
- Retraining shall be conducted:
    - When there is reason to believe an employee lacks the skill or understanding of the safe erection, use or dismantling of scaffolds.
    - Where changes at the worksite present a hazard about which an employee has not been previously trained.
    - Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
    - Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.
- A competent person shall be on site when assembling/disassembling scaffolding.
- Before ascending any scaffolding, a visual inspection shall be conducted by a competent/qualified person for shifting or damage that poses increased safety risks and to determine the scaffold is safe for use.
- Any scaffolding found to be unsafe shall be removed and tagged to prevent accidental use until it can be disposed of properly.
- The design load of all scaffolds shall be calculated on the basis of:
    - Light – Designed and constructed to carry a working load of 25 pounds per square foot.
    - Medium – Designed and constructed to carry a working load of 50 pounds per square foot.
    - Heavy – Designed and constructed to carry a working load of 75 pounds per square foot.
- All ladder stands and scaffolds shall be capable of supporting at least 4 times the design working load.
- All scaffold work levels 30 inches or higher above the ground or floor shall have guardrail protection.
- Guardrails for scaffolds manufactured or placed in service after January 1, 2000 shall have a toprail between 38” and 45”.
- Guardrails for scaffolds manufactured or placed in service prior to January 1, 2000 where both a guardrail and a personal fall arrest system are required, shall have a toprail between 36” and 45”.
- The working surface shall be fully planked and if using wood planks, ensuring the ends extend at least 6” but not more than 18” over the edge of the scaffold structure.
- All planking or platforms shall be overlapped (minimum 12 inches) or secured from movement.
- The maximum work level height shall not exceed 3 times the least base dimension below the platform. Where the basic mobile unit does not meet this requirement, outrigger frames shall be employed to achieve this least base dimension, or provisions shall be made to guy or brace the unit against tipping.
- Employees shall have safe access to the working platform. Cross braces shall not be used to access the work platform unless the scaffold is designed by the manufacture so that the end frames themselves can be used to provide safe access to the working surface. Check the manufacture’s manual to make sure.

- Scaffolds with wheels shall have the wheels locked before employees access the scaffolding and shall not be moved until all employees are off the scaffolding.
- Wheels or casters shall be properly designed for strength and dimensions to support 4 times the design working load.
- All scaffold wheels, casters and swivels shall be provided with a positive locking device, or other effective means to prevent movement of the scaffold.
- Ladder stands shall have at least 2 locking casters or other means of locking the unit in position. If only 2 casters are used, they shall be of the directional type and if 4 casters are used, at least 2 of the 4 shall be of the swivel type.
- Materials, tools, and debris shall be secured and/or toeboards used to prevent objects from falling.
- All scaffold work levels 6 feet or higher above the ground or floor shall have a toe board at locations where persons are required to work or pass under the scaffold.
- Where leveling of the elevated work platform is required, screw jacks or other similar means for adjusting the height shall be provided in the base section of each mobile unit. The screw jack shall extend into its leg tube at least 1/3 its length, but in no case shall the exposed portion of the screw jack exceed 12 inches.
- Employees working in the vicinity of scaffolding shall not climb, shake or move the scaffolding in any way.
- Scaffolds must be kept, at a minimum, 10 feet from any electrical hazards.
- Employees shall keep their feet flat on the deck and not use cross braces to achieve greater height.
- Fall protection must be worn at heights of 10 feet or above.

Silica Exposure

- Silica is a hard, unreactive, colorless compound that occurs as the mineral quartz and as a principal component of sandstone and other rocks. Silica as a material is not hazardous until it is cut. Once it is cut, blasted, chipped at, drilled or grinded it becomes a hazardous material.
- Silica is found in asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand and tile.
- Permissible Exposure Limits (PELs) or Short-Term Exposure Limits (STELSs) or National Institute of Occupational Safety and Health (NIOSH) Exposure limit is 50 micrograms of silica per cubic meter of air, averaged over an eight-hour day.
- Per OSHA employers can either use a control method in Table 1 of the construction standard, or they can measure worker's exposure to silica and independently decide which dust control method will work best to limit exposures on their jobsites to the PEL.
- Employers who follow Table 1 **correctly** are not required to measure worker's exposure to silica from those tasks and are not subject to the PEL.
- Silica Engineering controls include:
    - Using local exhaust ventilation, or using;
    - Wet sawing or drilling of silica containing materials, or;
    - Using containment methods such as blast-cleaning machines and cabinets.
- Silica Administrative controls include:
    - Limiting worker exposure time.
    - Requiring workers to shower and change into clean clothing before leaving the work site.
    - Use of PPE, which includes the use of respiratory equipment, where applicable.
    - Not eating, drinking or using tobacco products in the area where silica dust is present.
    - Washing hands before eating, drinking or smoking outside of the silica exposure area.
    - Air monitoring of employees who are or may be reasonably expected to be exposed to cut silica at or above the OSHA action level. This would include employees that are at the eight hours a day exposure limit or above the OSHA Action level of 25 µg/m3.
- When implementing the control measures specified in Table 1, the employer shall:
    - Provide a means of exhaust to minimize the accumulation of visible airborne dust for tasks performed indoors and/or in an enclosed area.
    - Apply water at flow rates sufficient to minimize release of visible dust for tasks performed using wet methods.
    - For measures implemented that include an enclosed cab or booth, ensure that the cab/booth
        - Is maintained as free as practicable from settled dust.

        - Door seals and closing mechanisms work properly.
        - Gaskets and seals are in good condition and work properly.
        - Is under positive pressure maintained through continuous delivery of fresh air.
        - Has intake air that is filtered through a filter that is 95% efficient – MERV-16 or better.
        - Has heating and cooling capabilities.
- Regardless of which exposure control method is used, employers are required to:
    - Establish and implement a written exposure control plan which identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
    - Designate a competent person to implement the written exposure control plan.
    - Restrict housekeeping practices that expose workers to silica, such as use of compressed air without a ventilation system to capture the dust.
    - Offer medical exams which includes chest X-rays and lung function tests every three years for employees who are required by the standard to wear a respirator for 30 or more days per year.
    - Train employees on the health effects of silica exposure and the tasks that may expose them to silica.
    - Keep records of employee's silica exposure and medical exams.
- Employers who do not fully implement the control methods on Table 1 or who choose alternative exposure control methods must:
    - Determine the amount of silica that workers are exposed to if it is, or may reasonably be expected to be, at or above the action level of 25 micrograms of silica per cubic meter of air averaged over an 8-hour day.
    - Protect workers from respirable crystalline silica exposures above the PEL.
    - Use dust controls and safer work methods to protect workers from silica exposures above the PEL.
    - Provide respirators to workers when dust controls and safer work methods cannot limit exposures at or below the PEL.
- OSHA allows employers to use any silica exposure air-sampling device that has been designed and calibrated to conform to the ISO/CEN convention, including higher-flow samplers such as the GK2.69.
- In low dust environments or when silica air sampling operations/tasks that last for less than 8-hours, using an air sampler with a higher flow rate may be more preferable than using the Dorr Oliver 10 mm nylon cyclone.
- The silica air sampling equipment must be properly calibrated before and after each day of sampling.
- Silica exposure samples should be submitted to and analyzed by a laboratory accredited by the American Industrial Hygiene Association (AIHA) or accredited to ANS/ISO/IEC Standard 17025:2005 with respect to crystalline silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 as outlined in **Appendix A**.
- The silica exposure samples are to be analyzed by the analytical laboratory using the procedures identified in **Appendix A** of the OSHA Silica Standards.
- If initial monitoring indicates employee crystalline silica exposures are below the OSHA Action Level of 0.025 mg/m3 for 8 hours, you may discontinue monitoring for those employees whose exposures are shown below the action level limits.
- Where the most recent monitoring shows employee crystalline silica exposures are above the OSHA Action Level, but below the OSHA PEL of 0.05 mg/m3 for 8 hours, monitoring is to be repeated within six months of the most recent monitoring.
- Where the most recent exposure monitoring shows employee crystalline silica exposures are above the PEL, repeat such monitoring within three months of the most recent monitoring.
- Where the most recent (non-initial) exposure monitoring indicates that employee silica exposures are below the Action Level, repeat monitoring within six months of the most recent monitoring until two consecutive measurements, taken seven or more days apart, are below the Action Level. At that time monitoring may be discontinued for those employees whose silica exposures are below the action levels
- Silica exposures are to be reassessed whenever there is a change in production, process, control equipment, personnel or work practices that may reasonably be expected to result in new or additional

exposures to crystalline silica above the action level or when there is reason to believe that new or additional exposures at or above the Action Level have occurred.

- Within 15 working days after completing a silica exposure assessment, five (5) days for Construction, each affected employee is to be notified of the results of that assessment either individually in writing or by posting the results in an appropriate location accessible to all affected employees.
- Whenever an exposure assessment indicates that employee silica exposure is above the PEL. The written notification is to describe the corrective action being taken to reduce employee silica exposure to or below the PEL.
- Silica exposure records must be kept for a period of 30 years for each employee exposed and tested for silica overexposure and must at least contain the following information:
    - The date of measurement for each sample taken;
    - The task monitored;
    - Sampling and analytical methods used;
    - Identity of the laboratory that performed the analysis;
    - Type of personal protective equipment, such as respirators, worn by the employees monitored; and;
    - Name, social security number and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

Spill Management

- All employees will be trained on proper spill prevention and response procedures. This training will be held as necessary for specific job-site hazards that are identified as well as periodic team training as part of our regularly scheduled training rhythm.
- Chemical substances should be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals shall be kept in closed containers and stored so they are not exposed to storm water.
- A proper spill kit must contain the appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials.
- Proper communication methods for reporting a spill will ultimately depend upon the type (chemical composition) and size of the spill. In the event of a minor spill, report it to the immediate supervisor or Program Coordinator. In cases of a toxic or large spill, report it to your immediate site supervisor and then call 911.
- When addressing spills involving hazardous or potentially hazardous materials, the company's SDS files shall be consulted **before** cleanup operations begin.
- Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices to prevent spills. This includes, but is not limited to, clean and organized storage, labeling, and secondary containment where necessary.

Trenching/Shoring/Excavation

- General Trenching/Shoring/Excavation work area precautions:
    - All activities will be conducted in accordance with OSHA and any applicable local permit requirements.
    - All work or entry will be supervised by a competent person with the appropriate certified training, skills, and experience to recognize hazards, and with the authority to implement any necessary corrective actions.
    - All areas 5' deep or greater will be protected from cave-ins by sloping, shoring, or benching.
    - Employees are not permitted to work in any trench or excavation area that has been deemed unsafe for any reason. Work will stop until the hazard(s) have been corrected.
    - **Employees will not be allowed to work in any unprotected area of a trench or excavation for ANY REASON.**
- Prior to Digging:
    - A permit will be obtained from the appropriate agency and a copy maintained at the work site.
    - The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined, and marked prior to opening an excavation.
    - All Regional Notification Centers in the area involved, and all known owners of underground facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2

working days prior to the start of any trenching and excavation work. EXCEPTION: Emergency repair work to underground facilities.

- While Digging:
  - When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.
  - Contact with live electrical lines and gas mains can cause death or serious injury. Extra care should be taken in these areas. If you are unsure, ask your foreman, site supervisor and/or the company's Designated Safety Officer.
  - While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees.
  - All surface encumbrances that are located that can create a hazard to employees, shall be removed or supported as necessary to safeguard employees.
  - Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.
  - Designs of support systems, shield systems, and other protective systems shall be selected and constructed by the employer or his designee and shall be in accordance with one of the following options:
    - Option 1 – designs for timber shoring as set forth in 1926.652(c)(1) Appendices A, C, D.
    - Option 2 – designs Using Manufacturer's tabulated data as set forth in 1926.652(c)(2).
    - Option 3 – designs using other tabulated data as set forth in 1926.652(c)(3).
    - Option 4 – designs by a registered professional engineer as set forth in 1926.652(c)(4).
  - The Program Administrator shall ensure that manufactured materials and equipment used for protective systems shall be used and maintained in a manner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.
  - When material or equipment that is used for protective systems is damaged, a competent person shall examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot assure the material or equipment is able to support the intended loads, or is otherwise unsuitable for safe use, then such material or equipment shall be removed from service and shall be evaluated and approved by a registered professional engineer before being returned to service.
  - Sidewalks, pavements, and appurtenant structures shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.
  - No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.
  - Adequate barriers or physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc. shall be barricaded or covered. Upon completion of exploration and other similar operations, temporary wells, pits, shafts, etc. shall be back filled.
  - Adequate barriers or barricades shall be erected when employees in or near an excavation are exposed to vehicular traffic. Affected employees shall wear reflective vests at the worksite.
- Open Trenches & Excavations:
  - Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rain storm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.
  - Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions, the competent person shall ensure exposed employees be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.
  - Soil classifications shall be determined by testing and protective systems designed based on the soil classification.
  - A stairway, ladder, ramp, or other safe means of egress shall be set up in trench excavations that are 4' or more in depth and to require no more than 25' of lateral travel for employees.

- Structural ramps that are used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a competent person qualified in structural design and shall be constructed in accordance with the design.
- Where employees or equipment are required or permitted to cross over excavations 6' or deeper and wider than 30", walkways or bridges with standard guardrails shall be provided.
- When mobile equipment is operated adjacent to an excavation or when such equipment is required to approach the edge of an excavation and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.
- Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.
- Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations or using retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations or by a combination of both if necessary.
- Where oxygen deficient (atmospheres containing less than 19.5% oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmosphere in the excavation shall be tested before employees enter excavations greater than 4' in depth and periodically for the duration of operations.
- Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5% oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation.
- Adequate precautions shall be taken, such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of flammable gas more than 20% of the lower flammable limit of the gas.
- When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.
- Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.
- Employees shall not work in excavations in which there is accumulated water or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water or use of a safety harness and lifeline.
- A competent person shall inspect the excavation to ensure safety before any work begins.
- If water is controlled or prevented from accumulating using water removal equipment, a competent person shall monitor the water removal equipment and operations to ensure proper operation.
- If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person.

Vehicle for Transporting Materials

- All loads shall be secured against dangerous displacement either by proper piling or other securing methods.

Welding Operations - Environment for Welding, Brazing and/or Cutting

All hot work is potentially hazardous and a hazard assessment should be performed to determine if and where any hazards exist **prior to** beginning work. A Hot Work Permit **shall be completed before** performing any welding or cutting operations. Some potential hazards are listed below:

Potential Hazard:

- Injury and illness caused by hot work (such as welding fumes, UV light, sparks, noise, or skin injury.

Possible Solutions:

- Inspect the work area to ensure that all fuel and ignition sources are isolated by shielding, clearing the area, lockout/tagout, soaking flammable material with water.
- Wear appropriate personal protective equipment, such as face shield, leather welder's vest, ear protection and gauntlet gloves. Use cotton or denim clothing.
- Provide UV shielding for arc welding where practical.
- Inspect welding and cutting equipment before use (arc or gas welding/burning).
- Leak test gas torches, gauges, and hoses.
- Review the hot work permit if available.
- Ensure the availability of adequate fire watch/fire protection equipment.
- Ensure adequate ventilation from toxic welding and cutting fumes.

Special Hazard:

- Accumulation of toxic gases within a confined space.
- A hazardous atmosphere exists in oxygen-deficient (atmospheric concentration of less than 19.5 percent) or oxygen-enriched (atmospheric concentration of more than 23.5 percent). (29 CFR 1910.146)

Possible Solutions:

- Ventilate toxic metal fumes mechanically, if entering a confined space, such as inside of a mud tank, oil tanks, hoppers, sump, pit or cellar.
- Use a written permit system to document authorization to enter the permit confined space, which includes the work to be performed, and the results of the gas monitoring where there is a potential for toxic, flammable, or oxygen-deficient atmosphere. Both a hot work and confined entry permit may be required for welding, cutting, or brazing within a confined space.

Additional Information:

- ANSI Z49.1-67 Safety in Welding and Cutting, American National Standards Institute.
- AWS Z49.1-88 Safety in Welding and Cutting and Applied Processes, American Welding Society.

Other Considerations:

- All areas assigned for welding or cutting operations shall be verified for sufficient ventilation or be equipped with appropriate respirator protection for the environment.
- All employees assigned to welding, brazing, or cutting activities shall be trained on the safe operation of welding equipment to be used and the safe use of the process. Training shall include the use of available fire extinguishing equipment.
- Before use, all welding, brazing, or cutting equipment shall be inspected. Any noted defects will be brought to the attention of the site supervisor, so the unit can be tagged and removed from service until either repaired or replaced. A qualified person shall only make repairs.
- Site specific review of area fire extinguishing equipment, location, and/or fire watch resources shall be conducted and ensure that fire extinguishers are readily available before beginning any welding, brazing, or cutting activities.
- A fire watch shall be assigned whenever welding, brazing, or cutting is performed in locations where other than a minor fire might develop or any of the following conditions exist:
    - Appreciable combustible material is closer than 35' to the point of operation.
    - Wall or floor openings within a 35' radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
    - Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs, and are likely to be ignited by conduction or radiation.
- Any assigned fire watch shall be maintained at least 30 minutes after all welding/cutting operations are completed.
- Assigned fire watchers shall be trained in the use of fire extinguisher/suppressant equipment and shall be familiar with the facilities for sounding an alarm in the event of a fire.
- Fire watchers shall have fire extinguishers readily available for use.
- If the object to be welded or cut cannot readily be moved, all moveable combustible fire hazards should be removed before beginning operations. Guards shall be used to confine heat, sparks, and slag to protect any immovable fire hazards.

- Welding, cutting, or brazing shall not be performed If the fire hazards cannot be taken to a safe place or guards cannot be used to confine heat, sparks, or slag.
- Before welding, cutting, or brazing is commenced on any surface covered by a preservative coating of unknown flammability, a qualified person shall make a test to determine its flammability.
- Any welding, brazing, or cutting on lead base metals, zinc, cadmium, mercury, beryllium or surfaces covered with toxic preservatives, including coatings which generate toxic substances upon heating, shall be stripped for a distance of at least 4" from the area of heat application and proper ventilation ensured or employees shall be required to use supplied air respirators.
- If welding, brazing, or cutting operations cannot be conducted safely, they shall not be performed until hazards are addressed/corrected.
- Appropriate eye, ear, head, face, body and hand protection are to be worn.

Welding Operations - Electric Welding

- All welding equipment shall be inspected before use. Any equipment found to be defective must be reported immediately and sufficiently labeled to prevent any use until it is repaired or replaced.
- Where the work permits, the welder shall be enclosed in an individual booth painted with a finish of low reflectivity, such as zinc oxide and lamp black, or shall be enclosed with noncombustible screens having a similar low reflectivity finish. Booths and screens shall permit circulation of air at floor level.
- Workers or other persons adjacent to the welding areas shall be protected from the rays by noncombustible or flameproof screens or shields or shall be required to wear appropriate goggles.
- Employees shall not engage in and shall not be exposed to the inert-gas metal-arc welding process unless the following precautions are taken:
    - Chlorinated solvents shall not be used within 200' of the exposed arc.
    - Surfaces prepared with chlorinated solvents shall be thoroughly dry before welding is performed on them.
    - Employees in areas not protected from the arc by screening shall be protected by appropriate filter lenses.
    - When welders are exposed to their own arc or to each other's arc, filter lenses shall be worn to protect against flashes and radiant energy.
    - Employees exposed to radiation shall have their skin covered completely to prevent ultraviolet burns and damage.
    - Helmets and hand shields shall not have leaks, openings or highly reflective surfaces.
    - Inert-gas metal-arc welding on stainless steel shall not be performed unless exposed employees are protected either by local exhaust ventilation or by wearing supplied air respirators.
    - Before welding, cutting, or heating is commenced on any surface covered by a preservative coating of unknown flammability, a qualified person shall make a test to determine its flammability.
    - All surfaces covered with toxic preservatives, including coatings which generate toxic substances upon heating, shall be stripped for a distance of at least 4" from the area of heat application or employees shall be required to use supplied-air respirators.
- Appropriate eye, ear, head, face, body and hand protection are to be worn.

Welding Operations - Gas Welding and Cutting Systems

- All welding equipment shall be inspected before use. Any equipment found to be defective must be reported immediately and sufficiently labeled to prevent any use until it is repaired or replaced.
- Employees in charge of the oxygen or fuel-gas supply equipment including generators, and oxygen or fuel-gas distribution piping systems shall be instructed in this type of work before being left in charge.
- Acetylene shall not be generated, piped (except in approved cylinder manifolds), or utilized at a pressure more than 15 pounds per square inch gauge pressure.
- The use of liquid acetylene shall be prohibited.
- Oil or grease shall not be permitted to come in contact with oxygen cylinders, valves, regulators or other fittings.
- Oxygen cylinders and apparatus shall not be handled with oily hands or gloves, or greasy materials.
- Welding fuel-gas cylinders shall be placed with valve end up whenever they are in use. Liquefied gases shall be stored and shipped with the valve end up. Nothing shall be placed on top of an acetylene cylinder when in use which may damage the safety device or interfere with the quick closing of the valve.
- Cylinders shall be handled carefully. Rough handling, knocks, and falls are liable to damage the cylinder, valve or safety devices and result in leakage.

- Before connecting a regulator to a cylinder valve, the valve shall be opened slightly and closed immediately.
- The valve shall be opened while standing to one side of the outlet; never in front of it.
- A fuel-gas cylinder valve shall never be opened, cracked near other welding work, or near sparks, flame, or other possible sources of ignition. EXCEPTION: Hydrogen cylinders. See supplier's instructions before connecting the regulator.
- Before a regulator is removed from a cylinder valve, the cylinder valve shall be closed, and the gas released from the regulator.
- If cylinders are found to have leaky valves or fittings which cannot be stopped by closing of the valve, the cylinders shall be taken outdoors away from sources of ignition and slowly emptied.
- Safety devices shall not be tampered with.
- The cylinder valve shall always be opened slowly.
- An acetylene cylinder valve shall not be opened more than one and one-half turns of the spindle, and preferably no more than three-fourths of a turn.
- Torches shall be lighted by friction lighters or other approved devices, and not by matches or from hot work.
- When flammable gas lines or other parts of equipment are being purged of air or gas, open lights or other sources of ignition shall not be permitted near uncapped openings.
- No welding or cutting shall be performed on an acetylene or oxygen pipeline, including the attachment of hangers or supports, until the line has been purged.
- No person other than the gas supplier, shall attempt to mix gases in a cylinder.
- Cylinders containing oxygen or acetylene, or other fuel or gas, shall not be taken into confined spaces.
- When operations are suspended for any substantial period, such as during lunch or overnight, gas cylinders shall be shut off and the below practices followed:
    - Where practicable, the torch and hose shall be removed from any confined space.
    - Upon completion or discontinuance of welding operations, the welder shall provide some means of warning other workers of the location of hot metal.
- Equipment shall be installed and used only in the service for which it is approved.
- Appropriate eye, ear, head, face, body and hand protection are to be worn.

Welding Operations – Handheld Torch Welding and Cutting Systems

- The torch should only be operated in well ventilated areas.
- Never ignite your torch near flammable material.
- Be cautious of wind when outside or air flow when in an enclosed space. It can cause the flame to jump and catch unintended items on fire or carry the flame back towards you.
- Avoid clothing that is loose or hangs. Loose or hanging clothing is more likely to accidentally catch on fire when operating a torch. Remove any hanging jewelry as it can get caught on the torch or be exposed to the flame and create a burn hazard.
- When lighting the torch hold the torch with the tip facing away from yourself, any flammable objects, or other people.
- Open the gas valve. If you have a striker, place it over the torch nozzle and strike it to ignite the gas. If your torch has an electric igniter, pull the trigger to ignite the gas. This may take several times.
- Some torches have a safety trigger that must be depressed when lighting the gas.
- Once the torch is lit you can adjust the height of the flame by turning the gas valve.
- A single torch flame has many different temperatures. For any gas the hottest part of the flame is at the tip of the inner flame where the pale outer flame meets the darker inner flame.
- After use, rotate the gas valve until the valve closes completely. Allow the torch to cool down. Separate the torch from the fuel cylinder and replace caps before storing in a dry location away from ignition sources.
- Do not leave the torch in direct sunlight and never store at temperatures above 120 degrees Fahrenheit.
- Never drop, throw or puncture fuel cylinders.
- Avoid tipping the torch more than 60 degrees from upright. Tipping the torch more than 60 degrees can cause the torch to flare.
- Heating a surface may cause heat to be conducted to adjoining surfaces that may be combustible or become pressurized when heated. Always check to make sure no unintended parts or materials are being

heated. Whenever there is a possibility that unintended parts or materials are being heated wait at least two hours before leaving the area to ensure no materials are smoldering and to reduce the risk of fire.

- Always have a fire extinguisher near the work area within easy reach should a fire break out.
- The tip of the torch can get extremely hot during use. Take precautions to protect yourself, property and other people from accidental burns.
- Never use the torch on or near highly combustible material. Be especially careful around motor vehicles or any gasoline-fired products. Look for and be aware of any hidden fuel lines.
- Always turn the torch off when setting it down. This reduces the risk of the torch tipping over and accidentally causing burns to yourself, property or other people.
- Be aware of possible leaks. Hissing of escaping gas or losing fuel are signs of a possible leak.
- In a well ventilated, spark free area where there are no open flames, open the valve of the torch but do not ignite it. Use soapy water on all connections; if bubbles form the torch has a leak. **DO NOT** use if fuel is leaking. Notify your supervisor and/or management immediately.
- In cold weather be sure to warm the cylinder to room temperature prior to use.
- Many torches are designed to absorb drop impact so as to prevent damage to the pressurized fuel cylinder. This can result in the torch breaking off at the airholes when dropped or another component being damaged. **NEVER** use a damaged torch. If a torch is damaged notify your supervisor and/or management immediately.
- Please refer to Welding Operations - Environment for Welding, Brazing and/or Cutting and Welding Operations - Gas Welding and Cutting Systems for additional information.
- Appropriate eye, ear, head, face, body and hand protection are to be worn.

Safety and Health Communication

It is our company policy to maintain open communication between management and staff on matters pertaining to safety. Your thoughts regarding safety are considered important and we encourage your active participation in our company safety program. Please feel free to express any of your safety concerns or suggestions during safety meetings, individually to your supervisor, or in writing delivered to management. Be assured that all safety suggestions will be given serious consideration and that each will receive a response.

We recognize that open two-way communication between management and staff on health and safety issues is essential to an injury-free productive workplace. The following system of communication is designed to facilitate a continuous flow of safety and health information between management and staff in a form that is readily understandable and consists of the following checked methods:

- Employee orientations, conducted at the time of hire, will stress the importance of safety and will encourage all workers to report all hazards to a supervisor or to the program administrator without fear of reprisal.
- Regular safety meetings will be held monthly to keep employees informed of safety and health matters. The annually required OSHA safety topics will be covered throughout the year during these meetings. Attendance will be taken, and records maintained for no less than 3 years.
- Time will be provided to allow employees to state their safety concerns without fear of reprisal. Periodic meetings will be held with supervisory employees to discuss safety problems and accidents that have occurred.
- Effective communication of safety and health concerns between workers and supervisors, including translation where appropriate.
- A bulletin board will be maintained to inform employees on matters of worker safety and health and will include a poster encouraging employees to report unsafe conditions or occupational health concerns.
- Some safety and health information may be disseminated through company memoranda or pay envelope inserts.

Hazard/Risk Assessment

Periodic safety inspections will be conducted in our facility and at jobsites, using JSA's and/or JHA's, to identify and evaluate work place hazards and unsafe work practices, and assess the associated risks of injury/illness to employees. These inspections will be performed by designated competent observers, department supervisors, affected employees and/or sub-contractors. A safety plan will be developed and implemented based on inspection results and input from affected employees or their designated representative, and/or sub-contractors to meet safety/health goals, objectives, and performance measures, and in the identification and control of hazards in the workplace. Employees shall be trained in the

identification and control of hazards in the workplace and the procedures to follow when a hazard is identified. Employees shall be trained in the proper selection, use, and care of personal protection equipment. **(See Personal Protective Equipment (PPE) for more information.)**

Inspection forms will be forwarded, signed and dated, to the Program Administrator to ensure proper corrective action is taken.

All inspection findings and recommendations will be communicated to employees utilizing one of the methods outlined in the Safety and Health Communications section of this safety program.

Periodic safety inspections are performed per the following schedule:

- Monthly periodic inspections.
- When we initially establish our IIPP.
- When new substances, processes, procedures, or equipment which present potential new hazards are introduced into our workplace.
- When new, previously unidentified hazards are recognized.
- When occupational injuries and illnesses occur, as a routine part of every accident investigation.
- When we hire and/or reassign permanent or intermittent workers to processes, operations, or tasks for which a hazard evaluation has not been previously conducted.
- And/or whenever workplace conditions warrant an inspection.
- Hazard assessments should address hazards and identify control measures in order to minimize risks associated with working alone.
- When an employee is working alone, the employee shall carry a cell phone or other communications device on their person at all times. The employee shall contact the employer at pre-determined intervals based on hazards identified in the risk assessment.
- The Program Administrator will be responsible for implementing and maintaining a check-in procedure.
- Check-in procedures should include having a main person as a point of contact for the employee working alone. The person used as point of contact shall know the following:
    - Destination.
    - Estimated time of arrival.
    - Return date or time.
    - Contact information.
    - Mode of travel.
    - Alternate plans in the event of bad weather or traffic problems.
- In the event the lone employee can't be reached or does not respond by telephone or text messaging within 20 minutes, the point of contact person will arrange for face-to-face contact to be made with the employee by driving to the job site. Upon arrival at the job site, if the lone employee is injured, emergency medical services will be immediately notified**. (Please see Emergency Response section for more information on emergency procedures.)**

Periodic inspections consist of identification and evaluation of workplace hazards utilizing applicable sections of the site-specific hazard assessment checklist (when applicable) and any other effective methods to identify and evaluate workplace hazards.

Hazard/Risk Correction

Unsafe or unhealthy work conditions, practices, or procedures shall be corrected in a timely manner based on the risk associated with the task. A risk analysis matrix shall be developed indicating the severity and probability of occurrences. Hazards shall be corrected per the following procedures:

- When observed or discovered.
- When an imminent hazard exists which cannot be immediately abated without endangering employee(s) and/or property, we will remove all exposed workers from the area except those necessary to correct the existing condition. Workers necessary to correct the hazardous condition shall be provided with the necessary protection.
- All such actions taken and dates they are completed shall be documented on the appropriate forms.

Whenever an unsafe or unhealthy condition, practice, or procedure is observed or reported, the Program Administrator will take appropriate corrective measures, in a reasonable and timely manner, based on the severity of the hazard. Employees will be informed of the hazard and interim protective measures will be taken until the hazard is corrected.

Any hazard which is considered an imminent hazard will be abated immediately. Until the hazard is abated, employees will not be allowed to enter the hazardous area or operate hazardous equipment without appropriate personal protective equipment or training, and prior approval of the Program Administrator.

Records of periodic inspections and the corrective actions taken will be maintained for three years. The results of the inspections, the corrective actions taken, and the person(s) who conducted the inspections and abated the corrections will be included in this documentation.

Stop Work Authority

All employees will be provided stop work authority training per guidelines listed below:

1. **Stop**
   - When an employee or contractor perceives condition(s) or behavior(s) that pose imminent danger to person(s), equipment, or environment, he or she must immediately initiate a stop work intervention with the person(s) potentially at risk. If a supervisor is readily available and the affected person(s), equipment, or environment is not in imminent danger, coordinate the stop work action through the supervisor. If control of the risk is not clearly established or understood, any employee has the authority to stop work. The stop work action should be clearly identified as a stop work action and initiated in a non-combative manner.
2. **Notify**
   - Notify affected personnel and supervisors of the stop work action. If necessary, stop work activities that are associated with the work area in question. Make the area as safe as possible by removing personnel and stabilizing the situation.
3. **Investigate**
   - Affected personnel will discuss the situation and come to an agreement on the stop work action. If all parties come to an agreement that the area is safe to proceed without modifications, then work can resume. The SWA is complete at this point and no further steps are needed. If it is determined and agreed the SWA is valid, A Stop Work Issuance Form will be completed. The condition(s) or behavior(s) that pose threats or imminent danger to person(s), equipment, or the environment must be resolved before restarting work. Work will be suspended until a proper resolution is achieved.
4. **Correct**
   - Modifications to the affected area(s) will be made per the correction outlined in the Stop Work Issuance Form. Qualified experts will then inspect the affected area(s) to verify completeness of the modifications and to verify all safety issues have been properly resolved. The completion of modifications will then be noted on the Stop Work Issuance Form.
5. **Resume**
   - No work will resume until all issues and concerns have been addressed. The affected area(s) will be reopened for work by personnel with restart authority. All affected employees and contractors will be notified of what corrective actions were implemented (if applicable) and that work will recommence. **In the event an employee still believes it is unsafe, they will be assigned to another job with absolutely no retribution.**
6. **Follow-Up**
   - Operations Manager will provide the root cause analysis to the stop work action and identify any potential opportunities for improvement. The Safety Manager will review and publish the incident details regarding the stop work action to all Operations Managers and employees outlining the issue, corrective action taken (if applicable) and lessons learned. Management will promptly review all stop work reports to identify if an additional investigation or follow-up is required. No retribution will follow a stop work action initiated in good faith, even if it is deemed unnecessary. Personnel must not feel apprehensive to act on their obligation to initiate a stop work action.

Accident Investigation

All occupational injuries, illnesses, or near misses resulting from employment will be investigated by the Program Administrator or the department supervisor. All employees shall be familiar with the procedures for investigating workplace injuries, illnesses, hazardous substance exposures, and near misses which include the following:

1. Employee(s) or their representative shall report any work-related injury, illness hazardous substance exposure, or near miss immediately to their supervisor.
2. The Program Administrator or supervisor shall visit the accident, exposure, or near miss scene as soon as possible with proper equipment necessary to investigate.
3. Identify and assess the initial evidence.
4. Conduct interviews and collect statements from injured employee(s) (if applicable) and witnesses.
5. Examine the workplace for factors associated with the accident, exposure, or near miss.
6. Collect, preserve, and secure any evidence related to the incident.
7. Determine the cause of the accident, exposure, or near miss.
8. Take corrective action to prevent the accident, exposure, or near miss from reoccurring.
9. Record the findings and corrective actions taken.

All accident investigations will be conducted prior to the end of the day during which the incident was first reported by the injured employee or his or her representative (if applicable). All accident investigations will be documented utilizing the forms/procedures developed by Gering Valley Plumbing & Heating, Inc.

While conducting the investigation, attention will be given to suggesting ways of preventing future occurrences of the events which caused the injury, illness, hazardous exposure, or near miss. This report will then be reviewed by the Program Administrator to determine what corrective action(s) should be taken.

Accident investigation findings and recommendations will be communicated to employees utilizing one of the methods outlined in the Safety and Health Communications section of this safety program.

Occupational Safety and Health Training Program

Occupational Safety and Health Training will be provided to all company employees under the following guidelines:

- When the Safety Manual is first established.
- All new employees will be given a safety orientation at the time of hire. Subjects discussed will include the company safety manual and all associated programs, as well as any other pertinent safety rules and procedures.
- All supervisors will receive training to familiarize them with the safety and health hazards to which employees under their immediate direction and control may be exposed.
- Supervisors will be responsible to see that those under their direction receive training on general work place safety as well as specific instructions regarding hazards unique to any job assignment.
- All employees assigned to new jobs will be given safety training regarding any hazards prior to starting the new position.
- Employees will be given training whenever new substances, processes, procedures, or equipment are introduced to the workplace and represent a new hazard.
- Employees will be given additional training any time a new or previously unrecognized hazard is identified.
- To all workers with respect to hazards specific to each employee's job assignment.

Workplace safety and health practices for all industries include, but are not limited to:

- Explanation of the employer's Safety Manual, emergency action plan, and fire prevention plan along with procedures for reporting any unsafe conditions, work practices, injuries, and when additional instruction is needed.
- Use of appropriate clothing, including gloves, footwear, and other personal protective equipment.
- Information about chemical hazards to which employees could be exposed and other hazard communication program information.
- Availability of toilet, hand-washing, and drinking water facilities.
- Provisions for medical services and first aid including emergency procedures.

- In addition, specific instructions will be given to all workers regarding hazards unique to their job assignment, to the extent that such information was not already covered in other training.
- To ensure that all employees receive appropriate training, they will participate in:
    - Scheduled safety meetings.
    - Additional training as job duties or work assignments are expanded or changed.
    - Other training programs as appropriate.

Record Keeping

Records of hazard assessment inspections, including the person or persons conducting the inspection, the unsafe conditions and/or work practices that have been identified, and the action taken to correct the identified unsafe conditions and/or work practices, are recorded on a hazard assessment and correction form.

Documentation of safety and health training for each worker, including the worker's name or other identifier, training dates, type(s) of training, and name(s) of training providers are recorded on a worker training and instruction form. We also include the records relating to worker training provided by a construction industry occupational safety and health program approved by OSHA.

The program administrator will maintain records of all training sessions. Documentation will indicate the type of training given, the date of the training, the trainer's name, and the employee’s name and signature.

Cold Illness Prevention Procedures:

Our Company has developed these Cold Illness Prevention Procedures to control and reduce the hazards of cold illness for our outdoor operations. They are intended to prevent cold (hypothermia/frostbite) illness by establishing procedures for employees who are exposed to temperature extremes such as frigid cold while working outdoors.

Doneta Schlaepfer has been assigned as the Program Administrator who will oversee implementing and maintaining these procedures and all aspects of the emergency protocols. The Program Administrator and all supervisors shall be responsible for evaluating all our facilities and work environments to determine if our employees are at risk from cold related illnesses during temperature extremes and cold weather while working. If it is determined that employees are at risk, they will be trained to be aware of cold related illnesses, how to prevent cold related illnesses, the symptoms of cold related illnesses and procedures to take if symptoms are present.

Documentation

These Cold Illness Prevention Procedures shall be maintained in written form and be available at all times at our work sites. The Program Administrator shall be responsible for reviewing these procedures at least annually to ensure that they are correctly implemented and are working properly for our company as we currently operate.

General Procedures

All new employees will be trained on these procedures before they are exposed to environmental cold.

For employees who are regularly working outdoors in cold weather, there will be periodic, mandatory meetings to remind them and re-emphasize the importance of proper work attire, seeking shelter at the appropriate time to warm-up, and watching for signs and symptoms of cold illness in themselves and other employees.

The Program Administrator and all assigned supervisors are responsible for ensuring that all employees who are at risk for cold related illnesses are trained at least annually on this program.

Specific Worksite Information:

Worksite Name:	Worksite Address:

The Designated Person(s) For This Worksite:

Name:	Title:	Phone Number:

The designated person(s) listed above for this site shall ensure the implementation of, and shall have the authority to, enforce the following procedures for this policy:

Emergency Response

When temperatures fall to extreme levels, supervisors will modify work times and/or allow for more access to shelter as appropriate for the current temperature. Supervisors will continually check on employees and stay alert to the presence of cold related symptoms. All employees are expected to contact emergency medical services and ensure that there are clear and precise directions to the site that can be provided as necessary.

Access to Shelter

The Program Administrator and all supervisors shall ensure shelter is present when the temperature falls below 32 degrees. Supervisors will track and monitor weather to keep employees safe. When the outdoor temperature in the work area falls below 32 degrees Fahrenheit, the employer shall have and maintain a sheltered area that will provide relief from the extreme cold and outdoor elements. The sheltered area shall be located as close as practicable to the areas where employees are working.

Training

Employee Training

The Program Administrator shall be responsible for ensuring that employees, supervisory and non-supervisory, are trained in the following areas:

- Environmental and personal risk factors for cold related illnesses.
- Importance of appropriate protective clothing when working in cold temperatures.
- Importance of breaks for relief of extreme cold temperatures.
- Procedures for complying with cold illness regulations.
- Different types of cold illness and their common signs and symptoms.
- Importance of employees to immediately report signs or symptoms of cold illness in themselves or others.
- Procedures for responding to symptoms of possible cold illness.
- Procedures for contacting required emergency medical services.
- Procedures for ensuring that clear and precise directions to the work site can and will be provided as needed to emergency responders.

This training shall take place before any employee is exposed to environmental cold or begins outdoor work.

Supervisor Training

In addition to the areas outlined previously, the Program Administrator shall be responsible for ensuring that all supervisory personnel are trained in the following areas:

- Implementation of the provisions of the Cold Illness Prevention Procedures.
- Procedures each supervisor is to follow when an employee exhibits symptoms consistent with possible cold illness, including emergency response procedures.
- How to monitor weather reports and work site temperatures.

- How to respond to weather advisories.

This training must take place prior to the assignment to supervise any employees working in the cold or beginning outdoor work.

Precautions for Preventing Cold Illness

AWARENESS OF COLD ILLNESS SYMPTOMS CAN SAVE YOUR LIFE AND/OR THE LIFE OF A CO-WORKER!

When exposed to cold temperatures, the body begins to lose heat faster than it can produce. Prolonged exposure to cold can eventually use up the body's stored energy, which can result in hypothermia. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This is particularly dangerous because the victim may not know it is happening and will not be able to do anything about it.

Frostbite is an injury to the body caused by freezing, usually affecting the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage body tissue and severe cases can lead to amputation.

Dress appropriately for the weather and bring extra clothing to change into if necessary.

Dressing in layers enables employees to remove outer layers as necessary to adjust for body temperature when working and to prevent the layer of clothing next to skin from becoming damp from exertion and the elements.

Make sure to have the appropriate outer wear, coats, hats, gloves, etc. to protect skin from exposure to the cold.

When in extreme cold temperature take frequent breaks in a heated shelter.

When working in the cold, be sure you know how to call for medical attention. If you start to feel symptoms such as shivering, fatigue, loss of coordination, numbness, tingling or stinging and bluish or pale waxy skin, let your supervisor know and rest in a heated area. If symptoms persist or worsen, seek immediate medical attention.

You should immediately report all unsafe conditions and/or concerns to your supervisor or the Program Administrator.

Cold Temperature Procedures

The Program Administrator shall implement cold temperature procedures when temperatures equal or falls below 32 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- A brief "tailgate" meeting will be held with all employees to reinforce the importance of proper work attire, seeking shelter at the appropriate time to warm-up, and watching for signs and symptoms of cold illness in themselves and other employees.
- The Program Administrator shall ensure that effective communication by voice, observation, or electronic means, is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as cell phone may be used for this purpose only if reception in the area is reliable.
- All supervisors shall observe the employees for alertness and signs or symptoms of cold illness.
- All supervisors shall provide close supervision to any new employees for the first 14 days of their employment unless the employee indicates at the time of hire that he or she has been doing similar outdoor work.

Cold Illness Symptoms & Treatment Procedures

The following information helps employees recognize the main types of cold related illnesses, symptoms, and the appropriate treatment to reduce the effects of the cold related illness.

Hypothermia

Symptoms – Shivering, fatigue, loss of coordination, confusion and disorientation.
Treatment - Move person to a warm room or shelter. Remove any wet clothing. Warm the center of the body first (chest, neck, head, and groin) by use of blankets. Warm beverages may help increase the body temperature, but do not give alcoholic beverages. Do not try to give beverages to an unconscious person. If the victim has no pulse, begin CPR and call 911 immediately.

Frostbite

Symptoms – Reduced blood flow to hands and feet. Numbness, tingling or stinging, and aching. Bluish or pale waxy skin. **Treatment** - Move person to a warm room or shelter. Immerse the affected area in warm-not hot- water (the temperature should be comfortable to the touch for unaffected parts of the body). Warm the affected area using body heat, i.e. warm frostbitten fingers next to the body under the arms. NEVER rub or massage the frostbitten area as this may cause more damage. DO NOT use a heating pad, heat lamp, heat of a stove, fireplace or radiator for warming as affected areas can be easily burned. Call 911 if symptoms persist.

Emergency Procedures

Procedures for Emergency Medical Treatment

The Program Administrator will ensure that we have first-aid trained personnel available at all sites located in remote locations. These responders shall be appropriately trained and equipped to provide first-aid to employees who display signs or symptoms of cold illness.

If for some reason a properly, first-aid trained person is not available on-site, emergency medical services shall be contacted immediately if any employee is showing signs or symptoms of cold illness. Until emergency medical services arrive, or the employee is transported to a spot where emergency medical services can be met and take over treatment, the employee should be kept as comfortable as possible.

Procedures for Contacting Emergency Medical Services

The Program Administrator shall ensure that all supervisors and employees know the importance of obtaining emergency medical services as quickly as possible. It is even more important at remote locations and work sites. Before work begins at these types of work locations, the Program Administrator shall ensure that the supervisors have specific instructions on how to contact emergency medical services. Depending on the location and the availability of a landline, a cell phone shall be issued to ensure a means of communication. The availability of service will be checked prior to work beginning at the location as well. Each supervisor shall have written instructions including directions to the specific location. Included in these instructions will be the local police, fire, and ambulance services that can be used instead of calling 911.

If emergency medical services are extremely far away from the site or if they are not able to arrive at the location in a timely manner, the Program Administrator shall have specific written instructions for the supervisor to meet the emergency medical services at a pre-determined location. These instructions will include directions for the supervisor to get to the meeting point as well as directions to the meeting point that the supervisor can give to emergency medical services.

Additional Procedures:

The following procedures listed below are in addition to, and will be enforced the same as, the procedures outlined above in this Cold Illness Prevention Procedures (HIPP).

1.
2.
3.

Confined Space Program:

The purpose of our company's Confined Space Program is to set procedures that will ensure workers safe entry into confined spaces and permit-required confined spaces to perform routine tasks associated with their employment. No one shall be allowed to enter a confined space without following this Confined Space Program. This Confined Space Program is designed to provide safety requirements in accordance with the OSHA requirements for confined spaces.

Doneta Schlaepfer has been named the Program Administrator and is responsible for managing the Confined Space Program. The Program Administrator will ensure a survey of the worksite is conducted to identify all confined spaces. The purpose of the survey is to develop an inventory of those locations and/or equipment within our company that meet the definition of a confined space, the hazards of each space, power sources connected to the space, and the chemicals and materials likely to be in or affecting each space. This information will be communicated to all affected personnel and appropriate procedures will be developed prior to entry.

Background:

A confined space is defined as any location that is:

- Large enough that an employee can enter and perform work.
- Has limited or restricted openings for entry and exit.
- Not intended for continuous employee occupancy.

A confined space becomes a Permit-Required confined space when any of the following conditions exist in a confined space:

- Contains (or has a potential to contain) a hazardous atmosphere (flammable, explosive, toxic, not enough oxygen, etc.).
- Contains a material with the potential for engulfment of an entrant.
- Has an internal configuration that could trap/asphyxiate occupants.
- Other recognized serious safety or health hazards (such as steam, high pressure materials, live electrical parts, unguarded machinery, etc.).

When a confined space is identified as a Permit-Required confined space then the following shall be completed **PRIOR** to entry:

- A written permit-required space program, including completed permit, shall be implemented and made available at the construction site for inspection by employees and their authorized representatives.
- The permit-required space program shall address the following elements:
    - Implement the measures necessary to prevent unauthorized entry.
    - Identify and evaluate the hazards of permit-required spaces before employees enter them.
    - Develop and implement the means, procedures, and practices necessary for safe permit-required space entry operations.
    - Provide entry equipment at no cost to each employee, maintain that equipment properly, and ensure that each employee uses that equipment correctly.
- Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits, including the safe termination of entry operations under both planned and emergency conditions.
- The permit-required space entry permit must identify the following:
    - Space to be entered.
    - Purpose of the entry.
    - Date and the authorized duration.
    - Names of the authorized entrants.
    - Means of detecting an increase in atmospheric hazard levels in the event the ventilation system stops working.
    - Names of entry attendants.
    - Name and signature of entry supervisor.
    - Hazards of the permit-required space to be entered.

    - Measures used to isolate the permit-required space and to eliminate or control permit-required space hazards before entry.
    - Acceptable entry conditions.
    - Results of tests and monitoring performed, including names or initials of the testers and date/time of when the tests were performed.
    - Rescue and emergency services that can be summoned and the means such as the equipment to use and the numbers to call.
    - Communication procedures used by authorized entrants and attendants to maintain contact during the entry.
    - Equipment, such as PPE, testing equipment, communications equipment, alarm systems, and rescue equipment to be provided.
    - Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.
- Consult with affected employees and/or their authorized representatives on the development and implementation of all aspects of the written permit-required space program.

A Permit-Required confined space may only by reclassified as a 'Non-Permit' confined space when a competent person determines that all of the following applicable requirements have been met:

- The permit space poses no actual or potential atmospheric hazards and all hazards within the space are eliminated or isolated without entry into the space.
- Testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated or isolated.
- Forced air ventilation does not constitute elimination or isolation of the hazards.
- Document the basis for determining that all hazards in a permit space have been eliminated or isolated, through a certification that contains the date, the location of the space, and the signature of the person making the determination.
- If hazards arise within a permit space that has been reclassified as a non-permit space, each employee in the space must exit the space immediately. The entry employer must then re-evaluate the space and reclassify it as a permit space.

Assignment of Responsibility:

In administering this Confined Space Program, our company will:

- Monitor the effectiveness of the program.
- Provide atmospheric testing and equipment as needed.
- Provide Personal Protective Equipment as needed.
- Provide training to affected employees and supervisors.
- Provide technical assistance as needed.
- Preview and update the program on at least an annual basis or as needed.

The Program Administrator shall:

- Ensure that a list of confined spaces at all worksites is maintained.
- Ensure that cancelled permits are reviewed for lessons learned.
- Ensure training of personnel is conducted and documented.
- Ensure that equipment meets all standards and regulations.
- Ensure that all qualified entry supervisors in charge of confined space work will:
    - Verify requirements for entry have been completed before entry is authorized.
    - Verify confined space monitoring is performed only by qualified personnel.
    - Verify a list of monitoring equipment and qualified personnel is maintained.
    - Verify the rescue team has simulated a rescue in a confined space within the last 12 months.
    - Know the hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of exposure.
    - Complete required permits.
    - Determine entry requirements.
    - Require a permit review and signature from the authorized Entry Supervisor.

- Notify all involved employees of the permit requirements.
- Post the permit in a conspicuous location near the confined space entrance.
- Renew the permit or have it reissued as needed (every shift).
- Determine the number of Attendants required to perform the work.
- Ensure all Attendant(s) are given the required training and know how to communicate with the entrants and how to obtain assistance.
- Post any required barriers and signs.
- Remain alert to changing conditions that might affect the conditions of the permits.
- Verify periodic atmospheric monitoring is done per permit requirements.
- Verify that personnel doing the work and all support personnel have received required training and adhere to all permit requirements.
- Verify the permit is cancelled when the work is completed.
- Verify the confined space is safely closed and all workers are cleared from the area.
- Verify that rescue team members have current certification in first-aid and CPR.

Measures to Prevent Unauthorized Entry

If the confined space is entered, the Program Administrator will post danger signs or other equally effective means at all permit-required confined spaces to warn employees. A sign reading "DANGER - PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" will be used to accomplish this. Barriers/barricades shall be used, where applicable, to prevent pedestrians or vehicles from approaching or entering the confined space.

Identify and Evaluate Permit Space Hazards

The initial surveys will include air monitoring (when appropriate) to determine the air quality in the confined space. The potential for the following situations will be evaluated by Entry Supervisors and the Program Administrator:

- Flammable or explosive potential.
- Oxygen deficiency potential.
- Presence of toxic and corrosive materials.
- Presence of combustible materials (grain, dust, water, etc.) in the space.
- Presence of difficult 'terrain' in the space (sloping walls, equipment that entrants may be required to climb over or under, pits, twisting corridors, etc.).
- Presence of other known hazards (live electrical parts, unguarded machinery, etc.).

HAZARD RE-EVALUATION

The Program Administrator will identify and re-evaluate hazards based on possible changes in activities or other physical & environmental conditions that could adversely affect work. A master inventory of confined spaces will be maintained. Any change in the designation of a confined space will be routed to all affected personnel by the Program Administrator.

PRE-ENTRY HAZARD ASSESSMENT

A hazard assessment will be completed by the Program Administrator and entry supervisors prior to any entry into a confined space. The hazard assessment should identity:

- The sequence of work to be performed in the confined space.
- The specific hazards known or anticipated.
- The control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level.

No entry will be permitted until the hazard assessment has been reviewed and discussed by all persons engaged in the activity. Personnel who are to enter confined spaces will be informed of known or potential hazards associated with the confined spaces. Personnel entering confined spaces may request additional testing/monitoring at any time.

Safe Permit Space Entry Procedures

ACCEPTABLE ENTRY CONDITIONS

Any conditions making it unsafe to remove an entrance cover will be eliminated before the cover is removed. When entrance covers are removed, the opening will be promptly guarded by a railing, temporary cover, or other temporary

barrier that will prevent anyone from falling through the opening. This barrier or cover will protect each entrant working in the space from foreign objects entering the space. If it is in a traffic area, adequate barriers will be erected.

ATMOSPHERIC TESTING

Atmospheric test data is required prior to entry into a confined space. Atmospheric testing is required for two distinct purposes: (1) evaluation of the hazards of the permit space and (2) verification that acceptable conditions exist for entry into that space. If a person must go into the space to obtain the needed data, then Standard Confined Space Entry Procedures must be followed. Before entry into a confined space, the Entry Supervisor will conduct testing for hazardous atmospheres. The internal atmosphere will be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.

Testing equipment used in specialty areas will be listed or approved for use in such areas by the Program Administrator. All testing equipment must be approved by a nationally recognized laboratory. All testing equipment will be properly calibrated before every testing session to ensure accurate measurements.

EVALUATION TESTING

The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity. The analysis must identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed, and acceptable entry conditions stipulated for that space. Evaluation and interpretation of this data and development of the entry procedures should involve a technically qualified professional.

VERIFICATION TESTING

A confined space that may contain a hazardous atmosphere must be tested for residues of all identified or suspected contaminants. The evaluation testing should be conducted with specified equipment to determine that residual concentrations at the time of testing and entry are within acceptable limits. Results of testing shall be recorded by the person performing the tests on the permit. The atmosphere shall be periodically or continuously retested to verify that atmospheric conditions remain within acceptable entry parameters.

ACCEPTABLE LIMITS

The atmosphere of the confined spaces will be within acceptable limits when the following conditions are met and maintained:

- Oxygen: 19.5-23.5%.
- Flammability: Less than 10% of the Lower Flammable Limit.
- Toxicity: Less than recognized American Conference of Governmental Industrial Hygienists (ACGIH) exposure limits or other published exposure levels (varies by substance).
- Permissible Exposure Limits (PELs) or Short-Term Exposure Limits (STELSs) or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure.

ISOLATING THE PERMIT SPACE

All energy sources that are potentially hazardous to confined space entrants will be secured, relieved, disconnected and/or restrained before personnel are permitted to enter the confined space. Equipment systems or processes will be locked out and/or tagged out as required by our Lock-out/Block-out Program prior to permitting entry into the confined space. In confined spaces where complete isolation is not possible, the Program Administrator will evaluate the situation and make provisions for as rigorous an isolation that is practical. Special precautions will be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.

Where there is a need to test, position, or activate equipment by temporarily removing the lock or tag or both, a procedure will be developed and implemented to control hazards to the occupants. Any removal of locks, tags or other protective measures will be done in accordance with our Lock-out/Block-out Program.

INGRESS/EGRESS SAFEGUARDS

Means for safe entry and exit will be provided for all confined spaces to be entered. The Program Administrator shall evaluate each entry and exit points to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space. Appropriate retrieval equipment or methods will be used whenever a person enters a confined space. Use of retrieval equipment may be waived by the Program Administrator if use of the equipment increases the overall risks of entry or does not contribute to the rescue. A mechanical device will be available to retrieve personnel from vertical confined spaces greater than 5' in depth.

WARNING SIGNS AND SYMBOLS

All confined spaces that could be inadvertently entered will have signs identifying them as confined spaces. Signs will be maintained in a legible condition and will contain a warning that a permit is required before entry. Accesses to all confined spaces will be prominently marked.

Ventilating the Permit Space

ENGINEERING CONTROLS

Engineering controls eliminate or reduce the hazard by using some equipment to remove the hazard or shield it from the employees. Ventilation is one of the most common engineering controls used in confined spaces. When ventilation is used to remove atmospheric contaminants from a confined space, the space will be ventilated until the atmosphere is within the acceptable ranges.

Ventilation must be maintained during the occupancy if there is a potential for the atmospheric conditions to move out of the acceptable range. When ventilation is not possible or feasible, the Program Administrator and the Entry Supervisor will determine alternate protective measures or methods to remove air contaminants and protect occupants prior to authorizing entry.

When conditions necessitate and can accommodate continuous forced-air ventilation, the following precautions will be followed:

- Employees will not enter the space until the forced-air ventilation has eliminated all hazardous atmospheric contaminants and elimination of contaminants has been verified.
- Forced-air ventilation will be directed to ventilate the immediate areas where an employee is or will be present within the space.
- Continuous ventilation will be maintained until all employees have left the space.

Air supply or forced-air ventilation will originate from a clean source and always upwind from all entrances to the space.

Equipment for Confined Space Entry

All equipment required to enter a permit space shall be provided at no cost to any of our employees. This includes:

- Testing and monitoring equipment.
- Ventilating equipment and communication equipment.
- All personal protective equipment to be used when engineering and work practice controls do not adequately protect employees.
- Lighting equipment for permit space work and emergency evacuation.
- Barrier and shields for entrant protection.
- Equipment for egress, such as ladders.
- Rescue and emergency equipment.
- All other necessary/mandatory equipment.

Evaluating Permit Space Conditions

Conditions in the permit space will be tested to determine if entry conditions are acceptable for entry to be authorized. If isolation of the space is infeasible because the space is large or is part of a continuous system, pre-entry testing shall be performed to the extent feasible before entry is authorized. if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working to determine if acceptable entry conditions are being maintained during the entry operations. Employers may use periodic monitoring of the permit space if they can demonstrate that equipment for continuously monitoring that hazard is not commercially available.

When testing for atmospheric hazards, we will test for oxygen, combustible gases and vapors, and toxic gases and vapors, in that order.

Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system must alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.

All authorized entrants will have the opportunity to observe the pre-entry monitoring or any subsequent monitoring of the confined space. They will then be given the monitoring results. if the authorized entrant has any reason to believe that the evaluation of the space was not adequate, they may request a re-evaluation of the space be conducted. They will immediately be given the results of the re-evaluation.

Stationing of Attendants

At least one attendant will be provided outside of the permit space for the duration of any entry operation. The attendant(s) may be stationed at any location outside the permit space only if the duties can be effectively performed for the space being monitored.

Attendants may be assigned to monitor more than one permit space if the required duties of an attendant can be effectively performed for each permit space being monitored. If multiple spaces are to be monitored by a single attendant, emergency communication shall be in place and operational.

Duties for Actively Involved Personnel

Entry Supervisors

Entry supervisors will be qualified and have the authorization to approve confined space entry permits. Each entry supervisor will be responsible for:

- Knowing the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Verifying that the appropriate entries have been made on the permit, all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
- Terminating the entry and canceling the permit as required.
- Making sure a trained attendant is present at all confined space entries.
- Verifying that rescue services are available and that the means for summoning additional services are operable.
- Removing unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
- Determining, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

Attendants

- Attendants will be properly trained and shall be qualified to be stationed outside of the confined workspace. Each attendant will:
    - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
    - Is aware of possible behavioral effects of hazard exposure in authorized entrants.
    - Continuously maintain 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.
    - Remain outside the permit space during entry operations until relieved by another attendant.
    - Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
- Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and order the authorized entrants to evacuate the permit space immediately under any of the following conditions:
    - If the attendant detects a prohibited condition.
    - If the attendant detects the behavioral effects of hazard exposure in an authorized entrant.
    - If the attendant detects a situation outside the space that could endanger the authorized entrants.
    - If the attendant cannot effectively and safely perform all the duties required under this subsection.
    - Initiate on-site rescue procedures and, if necessary, summon additional rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.

- Take the following actions when unauthorized person(s) approach or enter a permit space while entry is underway:
    - Warn the unauthorized person(s) that they must exit immediately if they have entered the permit space.
    - Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.
- Perform non-entry rescues or other rescue services as part of the employer's on-site rescue procedure.
- Perform no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

Authorized Entrants

- Employees who are granted permission to enter a confined space will:
    - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
    - Properly use equipment required for entry.
    - Communicate 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.
- Alert the attendant whenever:
    - The entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
    - The entrant detects a prohibited condition.
- Exit from the permit space as quickly as possible whenever:
    - An order to evacuate is given by the attendant or the entry supervisor.
    - The entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
    - The entrant detects a prohibited condition.
    - An evacuation alarm is activated.

Rescue and Emergency Services

Gering Valley Plumbing & Heating, Inc. does not regularly engage in business activities constituting 'immediately dangerous to life and health' which would require on-site rescue services. If these conditions are met, on-site rescue services will be arranged for.

The employer shall ensure that at least one standby person at the site is trained and immediately available to perform rescue and emergency services. We will also follow the following requirements when our employees enter permit spaces to perform rescue services.

- The Program Administrator shall ensure that each member of the rescue service is provided with and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
- Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants.
- Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins or actual persons from the actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration and accessibility, simulate the types of permit spaces from which rescue is to be performed.
- Each member of the rescue service shall be trained in basic first-aid and in CPR.

When we arrange to have persons other than our employees perform permit space rescue, the Program Administrator shall:

- Inform the rescue service of the hazards they may confront when called on to perform rescue at the host employer's facility.
- Provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.

To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements:

- Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at a suitable point so that when rescued, the entrant presents the smallest possible profile. Wristlets may be used in lieu of the chest or

full body harness if the Program Administrator can demonstrate that the use of a chest or full body harness is not feasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.

- The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5' deep.

If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS/SDS) or other similar written information is required to be kept at the worksite, that document shall be made available to the medical facility treating the exposed entrant.

Training

The Program Administrator will ensure that training is provided so that all employees whose work is regulated by this Confined Space Program acquires the understanding, knowledge, and skills necessary for the safe performance of their duties in and around confined spaces.

The Program Administrator or qualified Entry Supervisor will provide training to each affected employee:

- Before the employee is first assigned duties within a confined space and annually thereafter.
- Before there is a change in assigned duties.
- Whenever there is a change in permit space operations that presents a hazard for which an employee has not been previously trained.
- When the Program Administrator has reason to believe that there are deviations from the confined space entry procedures required in this program or that there are inadequacies in the employee's knowledge.

The training must establish employee proficiency in the duties required in this program and must introduce new or revised procedures as necessary for compliance with this program.

The Program Administrator shall certify that the required training has been accomplished. The certification shall contain each employee's name, the signature/initials of the trainer and date(s) of training. This certification shall be available for inspection by our employees.

General Training

All employees who will enter confined spaces will be trained in entry procedures as outlined in this Confined Space Program. Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue will be adequately trained in their functional duties prior to any confined space entry. Training will include:

- Explanation of the general hazards associated with confined spaces.
- Discussion of specific confined space hazards associated with the facility, location, or operation including the signs and symptoms of overexposure and the consequences of exposure to the hazards.
- Proper use, limitations, and reasons for the use of PPE and other required safety equipment.
- Explanation of permits and other procedural requirements for conducting a confined space entry.
- A clear understanding of what conditions would prohibit entry.
- Procedures for emergency response including non-entry rescue and related equipment use.
- Duties and responsibilities of the confined space entry team.
- Description of overexposure symptoms to probable air contaminants in themselves and co-workers.
- The method(s) for alerting the attendant of concerns or situations in the space and the procedures to follow when the attendant orders evacuation, an automatic alarm is activated, or if they perceive they are in danger.
- An employee shall receive additional training (or retraining) under any of the following circumstances:
    - If the supervisor or annual inspections indicate that the employee is not complying with the safety-related work practices.
    - If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those that the employee would normally use.
    - If he or she must employ safety-related work practices that are not normally used during his or her regular job duties.

Refresher training will be conducted at least annually when entries occur on a regular basis or more often as needed to maintain employee competence in entry procedures and precautions.

Specific Training

Training for anyone designated to monitor the atmosphere shall include proper use of monitoring instruments, including instruction on the following:

- Proper use of the equipment.
- Calibration of equipment.
- Sampling strategies and techniques.
- Exposure limits (PELs, TLVs, LELs, UELs, STELs, etc.).

Training for Attendants must include the following:

- How to recognize potential permit space hazards and monitor activities inside and outside the permit space to determine if it is safe for entrants to remain in the space.
- How to maintain effective and continuous contact with entrants.
- How to continuously maintain an accurate count of all persons in the permit space.
- Procedures to summon emergency services as soon as he/she determines that entrants need to escape.
- That they must remain outside the permit space(s) during entry operations unless they are relieved by another trained/approved attendant.
- How to order entrants to evacuate the space when the attendant:
    - Observes a condition which is not allowed in the entry permit system.
    - Detects behavioral effects consistent with exposure to the hazards in the space.
    - Detects a situation outside the space which could endanger the entrants.
    - Detects an uncontrolled hazard in the space.
    - If monitoring entry in more than one space and must focus attention on the rescue of entrants from one of those other spaces.
    - Must leave the workstation.
- Take the following actions when unauthorized persons' approach or enter a permit space while an entry is underway:
    - Warn them away from the space.
    - Request their exit immediately if they have entered the space.
    - Inform the authorized entrants, and any other persons designated by the employer, that other persons have entered the space.
    - Properly use any rescue equipment provided for attendant use and perform any other assigned rescue and emergency duties, without entering the space.

Training for Emergency Response Personnel must include:

- All the training that is given to the authorized entrants.
- Rescue plans and procedures developed for each confined space that is anticipated to be encountered.
- Use of emergency rescue equipment.
- First-aid and CPR techniques.

Verification of Training

Periodic assessment of the effectiveness of employee training will be conducted by the Program Administrator. Training sessions will be repeated as often as necessary to maintain an acceptable level of personnel competence and no more than one year before a confined space entry.

Emergency Response

Rescue Procedures

The Program Administrator will maintain a plan of action that has provisions for conducting a timely rescue of individuals within a confined space should an emergency arise. These procedures will be kept onsite where the confined space work is being conducted. All affected personnel will be trained on emergency procedures.

Retrieval Systems and Methods of Non-Entry Rescue

Retrieval systems must be available and be used for non-entry rescue when an authorized person enters a vertical permit space unless such equipment increases the overall risk of entry or the equipment would not contribute to the rescue of the entrant. Retrieval systems must have a chest or full-body harness and a retrieval line attached at the center of the back near shoulder level or above the head. if harnesses are not feasible or would create a greater hazard, wristlets may be used

in lieu of the harness. The retrieval line must be firmly fastened outside the space so that rescue can begin as soon as anyone is aware that retrieval is necessary. A mechanical device must be available and attached to retrieve personnel from vertical confined spaces more than 5' deep.

Summoning Additional Emergency Services

If our normal rescue efforts are not effective during an emergency; the Entry Supervisor and the Attendant are authorized to summon additional rescue assistance by contacting the local fire department and/or other emergency services. The Program Administrator will ensure that they are supplied or have access to a communication system that will accomplish this task.

Permit Space Entry Communication and Coordination

At times, we may contract 'controlling contractor' with companies 'host employer' that requires our employees to perform work that involves permit-required confined space entries. We may also at times, sub-contract 'entry employer' work that involves permit-required confined space entries. When this occurs, the Program Administrator shall be responsible for coordinating all confined space entries with the host employer and communicating all relevant information to employees **BEFORE** operations begin. This shall include but not be limited to the following:

- The host employer must provide the following information to the controlling contractor:
  - Location of each known permit-required space.
  - Hazards or potential hazards in each space.
  - Precautions that the host employer or any previous controlling contractor or entry employer may have implemented for the protection of employees in the permit-required space.
- The controlling contractor must obtain the host employer's information about the permit-required space hazards and all previous entry operations and provide that information to each entity entering a permit-required space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit-required space.
- The entry employer must obtain all related entry information from the controlling contractor and inform the controlling contractor of the permit-required space program that they will follow.
- The controlling contractor and entry employer must coordinate entry operations when the following occurs:
  - More than one entity performs permit-required space entry at the same time.
  - Entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit-required space is performed.
- After entry operations have been completed the controlling contractor shall debrief each entity that entered a permit-required space(s) regarding the permit-required space program followed and any hazards confronted or created in the permit-required space(s) during entry operations.

Procedures for Concluding Permit Space Entry

The Program Administrator shall ensure that all entrants egress safely once all work is completed. At this point, the permit space must be closed off so that normal operations may resume. When entrance covers are replaced, all protective barriers will be removed once it is verified that the permit space is properly secured.

The Program Administrator will then ensure that the entry permit is cancelled and removed from the entry portal. This cancelled permit will be kept and used as part of the yearly review of the permit space program.

All energy sources that were potential hazards and were secured, relieved, disconnected and/or restrained will be returned to regular operating conditions. Equipment systems or processes that were locked out and/or tagged out will be returned to regular operation per the procedures outlined in our Lock-out/Block-out Program and will be checked to ensure proper operation.

Review of Entry Operations

The Program Administrator will retain all cancelled entry permits for at least 1 year to facilitate the review of the Confined Space Entry Program. Any problems encountered during an entry operation should be noted on the permit, so an effective program review can facilitate appropriate revisions to the Confined Space Permit Program. A review will be performed within this 12-month period. The Program Administrator may perform a single annual review covering all entries performed during a 12-month period. if no entries are performed during a 12-month period, no review will be performed.

The Program Administrator shall consult with affected employees during the annual review of the Confined Space Entry Program. Any changes made to the Confined Space Entry Program will be communicated to these affected employees during training that will take place upon these changes.

Emergency Action Plan:

We have developed the following Emergency Action Plan (EAP) to ensure that our employees are informed of and understand the proper procedures to follow in case of an emergency. This program will be maintained in written form and will be updated periodically to fully recognize potential emergencies that may occur in our work environment.

This EAP shall cover, at a minimum, the following elements:

- Program implementation and the assigned Program Administrator.
- Supervisor/Manager responsibilities.
- Emergency posting notifications and reporting.
- Procedures for first-aid/emergency medical services.
- Procedures for alarm/communication system.
- Designated first-aid providers and their rescue and medical duties.
- Employee training.
- Emergency escape/evacuation procedures and route assignments.
- Multi-employer site procedures.
- Procedures for employees who remain for critical facility operations.
- Procedures to account for all employees post-evacuation.
- Crisis response procedures.

Program Implementation and Safety Officer

Doneta Schlaepfer has been assigned as the Program Administrator who will oversee implementing and maintaining this EAP and all aspects of the emergency procedures for our company.

The Program Administrator shall be responsible for the following functions and procedures:

- Identify and evaluate potential types of emergencies that may occur within our company.
- Establish procedures for these potential emergencies.
- Conduct and evaluate periodic emergency drills/evacuations as appropriate.
- Maintain the proper equipment and enough emergency supplies as is appropriate for our company.
- Coordinate the implementation and maintenance of this EAP with all supervisory personnel.
- Coordinate all training - employee, supervisor, first-aid, etc.
- Assist supervisors/managers with departmental training.
- Maintain all relevant documentation associated with the EAP.

Supervisor/Manager Responsibilities

Supervisors and managers are responsible for assisting the Program Administrator with implementing and maintaining this EAP. They are also responsible for assisting in developing job specific or location specific emergency procedures. Each supervisor will also maintain a copy of this written program for reference.

Supervisors will assist the Program Administrator with the following:

- Identification of evacuation routes and assembly areas.
- Designating employees to assist with emergency evacuations.
- Assist in the training of employees in evacuation procedures.
- Overseeing first-aid and CPR training for designated employees.
- Monitoring first-aid supplies at designated locations and sites.
- Provide feedback to Program Administrator for program evaluation.

Emergency Posting Notifications and Reporting

Notices will be posted in accessible locations so that the following information shall be available during emergency situations:

- Identification of the Program Administrator or site manager including regular contact information and after hours contact information.
- Fire, Police and Ambulance phone numbers.
- Nearest hospital phone number.
- Nearest OSHA office phone number.
- Maps of site, including evacuation routes, assembly areas, first-aid supply and fire extinguisher locations.

Once the reporting procedures have begun, the Program Administrator will be immediately notified as to the type of emergency.

Emergency Medical Services Procedures

For most emergency situations, outside services such as fire, ambulance and police will be the primary and preferred source for emergency services. However, there may be situations that arise where employees within our company shall perform first-aid and initial triage procedures. Only certified and authorized employees will be allowed to provide these emergency medical services and only to the extent that it is needed to preserve a life until medical personnel respond to the situation. The Program Administrator shall ensure that an adequate number of employees are certified to provide first-aid in emergency situations if required.

An adequate supply of first-aid and emergency supplies will be kept on hand. The supplies will be properly maintained and accessible in all locations and sites. The supplies shall be kept in a waterproof container and periodically inspected to ensure that all supplies are within their expiration dates. These supplies must all be approved by a consulting physician.

As part of the first-aid and emergency services procedures, a means of communication shall be maintained to contact the nearest emergency facility. This means of communication shall be accessible to all people designated by the Program Administrator. These designees shall direct emergency services to the location of the injured or ill employee.

Emergency washing facilities shall be provided in the facility if there is an exposure to injurious corrosive materials. This emergency washing facility shall be immediately available and provide for quick drenching and flushing of the employee's eyes.

Alarm System

In the event of an emergency when evacuation of our employees is required, we will have a distinct and recognizable alarm or other communication system that will signal the employees to evacuate. All employees will become familiar with the evacuation alarm because of evacuation drills that will be held periodically by our company.

Our alarm system is loud enough and will provide adequate warning to ensure our employees can hear and react to the emergency in a timely manner. In the case that we have hearing-impaired employees, we shall have designees that are responsible for alerting them to the emergency to ensure proper evacuation.

The Program Administrator shall assure that all devices and components of the alarm system or communication system comply with the requirements of the OSHA standard for Employee Alarm Systems.

Training

DESIGNATED EMPLOYEE TRAINING

The Program Administrator shall designate and train enough people in our company to assist with any emergency evacuation of our employees. Each employee will be trained in his/her responsibility in an emergency evacuation and how to perform these duties in a safe and orderly manner. All designated employees will be trained at the following times:

- When the plan is initially developed and implemented.
- When the employee's responsibilities change under this EAP.
- Whenever the EAP is changed or updated.

The Program Administrator shall review with the employees, upon initial assignment of the emergency duties, all portions of the EAP that will assist in keeping them safe in the event of an emergency. This written plan shall be kept in an accessible location in our workplace and be readily available for review by any of our employees.

EMPLOYEE NOTIFICATION AND TRAINING

All our employees, full time, part time and intermittent, shall be provided the necessary and appropriate training on the elements included in this EAP. Notification of this program and training on the elements will occur under the following conditions:

- When the plan is initially developed and implemented.
- When work begins at a new location or job site.
- A new employee is hired to a specific location or job site.
- An employee is transferred to a new location or job site.
- Whenever the EAP is changed or updated.

To ensure that we comply with the required training of our employees, the Program Administrator shall ensure that documentation is kept of all training sessions. These will include a new hire safety orientation checklist, employee safety training record and records of safety meetings.

Components of the EAP training shall include the review of the EAP, location of emergency postings, evacuation procedures and maps, specific response procedures for different emergency situations, how to identify the alarm system, and who will provide emergency medical services for our company. It will also include these procedures to be followed when an evacuation occurs:

- Employees must exit facility and proceed directly to the designated safe/assembly area.
- Employees will not stop to pick up personal or work-related items when exiting.
- Employees will stay in designated areas so that emergency vehicles and personnel have full access to the facility.
- Employees will not be allowed entrance to the facility until the all clear is given and it has been determined that re-entry is safe.
- Employees are to remain at the assembly site unless directed to leave by the Program Administrator or assigned designee.
- Employees shall not respond to media inquiries. Employees will direct all media inquiries to the Program Administrator or assigned designee.

Emergency Evacuation Procedures and Assignments

All locations and job sites will be evaluated to properly identify emergency evacuation routes. Part of this evaluation will also identify safe assembly locations and any appropriate back-ups. This information will be documented and posted on our bulletin board and in our evacuation maps. These identified evacuation routes and safe assembly locations will be periodically evaluated to ensure that they remain viable for these purposes. The following responsibilities and tasks will be carried out if an evacuation must take place during an emergency:

- The Program Administrator or assigned designee will sound the evacuation alarm if it is not automatically triggered.
- The Program Administrator or assigned designee will ensure that all emergency services and our management is notified of the situation.
- The Program Administrator or assigned designee will ensure that all locations or work sites affected by the emergency are clear of employees that are not designated with specific emergency duties.

MULTIPLE EMPLOYER WORK SITES

Emergency escape and evacuation procedures shall be coordinated with other employers in our facility, location, or site, to ensure that all employees are trained to respond in emergencies. This is also to ensure that all employees, regardless of their employer, know where their assembly areas are and do not put others at risk.

Procedures to Account for All Employees

All supervisors and managers or their assigned designees shall have an accurate accounting of their employees in the facility or at the site on any given day. They must be aware of who is out sick, on vacation, or away from the location. After an emergency evacuation takes place, all supervisors and managers or their assigned designees shall take a formal headcount to ensure all employees are accounted for.

In addition, all guests, customers, and clients of the facility or location, will be required to sign in and out for each visit. This will give us an accurate accounting of everyone in our facility. The receptionist or front office personnel will be responsible for taking the sign-in sheet to the assembly area so that a headcount may be performed on these individuals as well.

For those employees assigned to perform sweeps of the facility to ensure proper evacuation, they shall have an appropriate form of communication so they can be monitored during this time. Once they complete their required duties, they will report in person to the Program Administrator or assigned designee to be accounted for as well. This will ensure all employees, supervisors, managers, and guests of the facility, are accounted for after the evacuation.

The protection and preservation of human life is the most important focus of these procedures!

Procedures for Critical Business Operations

The Program Administrator may have assigned several key personnel to remain behind to ensure critical business operations are maintained to prevent additional hazardous situations that may occur. They will remain in constant contact with the Program Administrator via electronic communication or other means. The Program Administrator shall monitor the emergency action that these employees will operate under.

If the situation worsens, the employees may be ordered to evacuate at any moment. These employees are also under specific directions to evacuate if the situation worsens and they feel it is unsafe to continue their critical plant operations. These employees will only be required to stay if they are not in immediate danger.

Crisis Response Procedures

The first rule for all crisis events is to **REMAIN CALM** - you will set the standard for the behavior of all other employees. It is the responsibility of the Emergency Response Team to coordinate the actions of all persons involved. In many emergencies, initial firm control of the situation can mean the difference between an emergency brought under control or one that can escalate into a crisis that is out-of-hand.

Fire Procedure

Discovery of a Fire

Assess the situation. If the area or material involved in the fire is small; you should first try to extinguish the fire. If the fire appears to be too large to be extinguished by a portable fire extinguisher, immediately call 911 and initiate evacuation.

For minor fires, you should use a portable fire extinguisher and follow the P.A.S.S. method:

- Pull the pin.
- Aim the extinguisher at the base of the fire.
- Squeeze the handle of the extinguisher.
- Sweep the extinguisher side-to-side in a slow steady motion.

NOTE - In the event of an electrical fire, the electricity to the area should be shut off before you attempt to extinguish the fire.

If the fire is not extinguished by using a portable fire extinguisher or any installed automatic system, follow these steps:

- Do not try to fight the fire with other materials.
- Employees will be directed to evacuate the facility.
- Calmly evacuate the facility.
- Follow notification procedures for emergency assistance.
- Gather at the designated safe area(s) away from the facility.
- A head count will be taken of all employees to ensure everyone has been evacuated.
- **DO NOT** re-enter the facility under any circumstances until the fire has been extinguished and the facility has been declared safe to enter.

Notify the Appropriate Authorities/Management

The fire department and other emergency assistance will be notified as appropriate. Company Management should be called as soon as possible, if not present.

Recovery from the Fire

- Facts will be gathered as calmly and systematically as possible. This will allow you to provide correct information when and where needed.
- A visual safety inspection of the facility will be performed, both inside and outside. All damage will be documented on appropriate company forms.
- Utilities will be restored to facility, where possible.
- Normal operations will resume as quickly as possible.
- Arrangements will be made to have portable fire extinguishers charged/replaced and the automatic sprinkler system re-certified as needed.
- Repairs to the facility will be completed as soon as possible.

Armed Robbery Procedure

An armed robbery is a dangerous, volatile situation that can rapidly escalate into a hostage crisis that places employee lives in danger.

During the Robbery

- **DO NOT** be a hero. The safety of your life and the lives of all other employees is more important than any money or other items.
- Remain calm. Help keep other employees calm. Obey the robber's orders.
- **DO NOT** startle the robber in any manner.
- **DO NOT** argue with, fight with, or chase the robber.
- Pay close attention to details of the physical description of the robber and the robber's vehicle, if possible.

After the Robbery

- Activities will be coordinated immediately following the robbery.
- Act as a calming influence on all other persons involved.
- The proper authorities and Company Management will be notified.
- All evidence should be preserved, do not disturb any objects that the robber might have touched.
- Cooperate with the authorities in the investigation.
- Facts will be gathered. Take statements from witnesses; what they saw and what was taken.

Recovery from an Armed Robbery

- The work environment will be brought back to normal as soon as possible.
- Repairs to the facility will be completed as soon as possible.
- Emergency crisis counseling will be considered and offered to all involved employees.

Workplace Violence Procedure

Workplace violence can include events such as drive-by shootings, violence by disgruntled employees, customers, or ex-employees seeking revenge. Alert your supervisor or management if you believe an employee or customer is exhibiting potentially violent or violent behavior and remove yourself and coworkers from the immediate area if necessary. Some indicators of potentially violent behavior may include one or more of the following:

- Increasingly erratic, unsafe, or aggressive behaviors.
- Hostile feelings of injustice or perceived wrongdoing.
- Drug and/or alcohol abuse.
- Marginalization or distancing from friends and colleagues.
- Changes in performance at work.
- Sudden and dramatic changes in home life or in personality.
- Financial difficulties.
- Pending civil or criminal litigation.
- Observable grievances with threats and plans of retribution.

Purpose

To provide general and voluntary direction to employees on how to respond during an incident in which damage, injury or death could occur and when regular, established, procedures surrounding an evacuation cannot be safely followed. This guidance is a resource tool and provides general principles and direction as each incident will be unique and is unpredictable.

Scope

This procedure is for **All** individuals (employees, vendors, visitors, customers, etc.) on the premises of a facility during a violent incident.

Rationale

The possibility of a violent incident in the workplace is a reality. The level of preparedness to respond to such an incident in a facility may have an impact on the outcome of the incident. If an incident occurs, it is highly unlikely that the police will be on site at the outset of the incident. Accordingly, every employee must be prepared to respond quickly and effectively. These types of incidents may be over in a matter of minutes, perhaps even before the police arrive, and the outcome of such an incident may be dependent on the ability of information to be disseminated and individuals to respond as quickly as possible.

Use the following guidelines If the incident is over **BEFORE** the police arrive:

- Bring the scene under control, i.e., ascertain the assailant(s) are gone or incapacitated, call 911, if they have not been called, and stay on the line with them to give the necessary information needed, calm any individuals, if necessary, at the scene, provide first aid to those injured, etc.
- Secure the scene, if possible, which will aid in investigation by the authorities.
- **DO NOT** move the injured, if any, unless there is imminent danger of further injury and it is safe to do so.
- When help arrives, follow instructions given by law enforcement and first responders.

Be Prepared

1. Take notice of your surroundings and identify potential emergency exit routes.
2. Be aware of unusual behaviors, unattended objects, unexplained odors, or vehicles traveling at abnormal speeds or patterns.
3. Establish locations to meet to account for individuals at the facility.
4. Report any suspicious items or activities to your supervisor, management, and/or law enforcement.

How to Respond

If you observe a violent incident, DO NOT ENGAGE OR APPROACH THE ASSAILANT(S). DON'T HESITATE - take immediate action to get to a safe location and call 911.

1. Evacuate:
    - Have an escape route and plan in mind prior to an incident occurring.
    - Try to escape if you know where the assailant is and an escape route is immediately available to you.
    - Leave your belongings behind.
    - Keep your hands visible to responding police officers.
2. Hide Out:
    - If in doubt whether you can escape safely, find the safest available area to hide.
    - Hide in an area out of the assailant's view.
    - Lock or block entry to your hiding place.
    - Block entry using any available items and stay behind solid objects out of the assailant's view.
    - If safe, allow others to seek refuge with you.
    - Silence your cell phone.
    - Cover your nose and mouth if you notice unusual odors or eye irritation.
3. Take Action:
    - As a last resort and only when your life is in imminent danger.
    - Act with physical aggression and attempt to incapacitate the assailant(s) with any means available.
4. Call 911:
    - Provide information to law enforcement or the 911 operator, including:

- Location of the assailant(s).
- Number of assailants.
- Physical description of assailant(s).
- Number and type of weapons being used by the assailant(s).
- Number and location of victims/potential victims.

5. When Law Enforcement Arrives:
    - Remain calm and follow instructions.
    - Put down any items in your hands, i.e., bags, jackets, keys, etc.
    - Raise hands and spread fingers.
    - Keep hands visible at all times.
    - Avoid quick movements toward officers such as holding on to them for safety.
    - Avoid pointing, screaming or yelling.
    - Do not stop to ask officers for help or direction when evacuating.

Recovery from an Incident

- Notify management as soon as possible of the incident.
- Information should be gathered, including witness statements – this will help in assessing how to prevent an incident from reoccurring.
- Pictures will be taken where appropriate.
- Proceed as directed by authorities and/or company management.

Civil Unrest Procedure

During the Civil Unrest

- **REMAIN CALM**. The number one priority is the safety of the employees. In most cases, you will not encounter any violence.
- Employees will prepare the facility for closing.
- All doors and windows should be secured.
- Equipment should be turned off.
- Utilities will not be turned off unless we are forced to evacuate and there is a chance of being unable to return for an extended period. Remember, it may be a few days before return to the facility is possible.
- If looters are encountered while the facility is still occupied, treat the situation as a robbery - **DO NOT** attempt to stop any looting if it will endanger you or any other persons in the facility.
- Law enforcement and other emergency assistance will be notified as appropriate. Contact Company Management as soon as possible.
- Follow directions provided by law enforcement regarding evacuation and safe evacuation routes.

Recovery from Civil Unrest

- A vital tool in recovery from this type of emergency is to gather facts in a calm and systematic way. This will allow correct information to be given to the authorities and management.
- A visual inspection of the facility will be performed both inside and outside.
- Utilities will be restored, if necessary.
- The working environment will be brought back to normal as soon as possible.
- All damage will be documented on appropriate forms and in the appropriate manner.
- On-site crisis counseling will be provided, if necessary.

Bomb Threat Procedure

Bomb threats are most commonly received via phone, but are also made in person, via email, written note, or other means. Every bomb threat is unique and should be handled in the context of the facility or environment in which it occurs. Facility supervisors and law enforcement will be in the best position to determine the credibility of the threat.

Planning Considerations Prior to an Incident Occurring

- Develop clear-cut primary and secondary levels of authority with a list of names and contact information as they will be the site decision makers during a possible/real threat.
- Select Evacuation and Search Team personnel.
- Develop training plan.
- Determine search procedures.
- Designate control center locations.
- Plan for emergency assistance, i.e., police, fire, etc. Have numbers readily available if needed.
- Establish primary and secondary evacuation routes and assembly areas.
- Establish evacuation signal(s). Make sure everyone is aware of what the signal(s) is/are and knows who to report to for further instructions.
- Develop a communication plan. Basically a summary of the items listed above.
- Determine procedures for accessing and shutting off reactivating utilities.

Preventative Action

- Control building access. Use Staff/Visitor sign-in/out sheets that include names, dates and times of entry/exit.
- Implement strict master key control program.
- Inspect incoming parcels.
- Safeguard confidential material.
- Keep exits unobstructed.
- Ensure adequate internal/external emergency lighting.
- Utilize electronic surveillance/building alarms.

Responding to a Bomb Threat

Phoned Threat

- Remain calm and **DO NOT** hang up.
- If possible, signal other staff members to listen and notify Site Decision Makers and authorities.
- If the phone has a display, copy the number and/or letters on the window display.
- Write down the exact wording of the threat.
- Keep the caller on the line for as long as possible and try to gather as much information about the caller as you can, i.e., male/female, accent, etc.
- Record the conversation if possible.
- After the call, be available to speak with the designated Site Decision Makers and authorities.

Verbal Threat

- If the perpetrator leaves, note which direction they went.
- Notify the Site Decision Makers and authorities immediately.
- Write down the threat exactly as it was communicated.
- Note the description of the person who made the threat, i.e., name, if known, gender, body size, distinguishing features, etc.

Written Threat

- Handle the document as little as possible. Secure the document and **DO NOT** alter the document in any way.
- Notify the Site Decision Makers and authorities immediately.
- On a separate piece of paper write down the following:
    - Date, time and location the document was found.
    - Any situations or conditions surrounding the discovery or delivery of the threat.
    - Full names of any person who saw the threat.

Emailed Threat

- Leave the message open on the computer.
- Notify the Site Decision Makers and authorities immediately.
- Print, photograph, or copy the message and subject line, note the date and time.

Every situation is unique and should be handled in the context of the facility or environment in which it occurs. In all situations, it is important to follow the instructions given by the Site Decision Makers and authorities.

Threat Assessment

All threats should be carefully evaluated. The facts and context of any threat should be considered carefully when determining if the threat is real or a hoax.

Low Risk

This type of threat lacks realism and poses a minimum risk to the victim and public safety. It is meant more to cause disruption to the company's operations.

- Threat is vague and indirect.
- Information contained in the threat is inconsistent, implausible or lacks detail.
- Caller is definitely known and has called numerous times before.
- The threat was discovered instead of delivered, i.e., a threat written on a wall, etc.

Medium Risk

This type of threat contains a level of realism and could possibly be carried out. However, the threat may not appear entirely realistic.

- Threat is direct and feasible.
- Wording in the threat suggests the perpetrator has given some thought on how the act will be carried out.
- May include indications of a possible place and time.
- No strong indication the perpetrator has taken the necessary steps to follow through with the threat, although there may be some indirect references pointing to that possibility.
- Indication the perpetrator has details regarding the availability of the components needed to construct a bomb.
- Increased specificity to the threat, i.e., "I'm serious." or "I really mean this.".

High Risk

This type of threat is specific and realistic. The threat appears to pose an immediate and serious danger to the safety of others.

- Threat is direct, specific, and realistic. I may include names of possible victims, location of the device and specific time it will denotate.
- Perpetrator provides his/her identity.
- Threat suggests concrete steps have been taken toward following through with the threat.
- Perpetrator indicates they have practiced with a weapon or have had the intended victim(s) under surveillance.

Suspicious Item

A suspicious item is anything, i.e., envelope, package, vehicle, etc., that is reasonably believed to contain explosives, and IED, or other hazardous materials that requires a bomb expert to further evaluate the item. Potential indicators are threats, placement, and proximity of the item to people and valuable assets. Examples include but are not limited to: unexplained wires or electronics, other visible bomb-like components, unusual sounds, mists, vapors or odors. Generally, anything that is hidden, obviously suspicious and not typical should be deemed suspicious.

NOTE: Not all items are suspicious. An Unattended Item is an item, i.e., bag, package, etc., of unknown origin and content where there are no obvious signs of being suspicious, especially if no threat was received. A facility search, lock-down, or evacuation is not necessary unless the item is determined to be suspicious.

If a suspicious item is found, follow these procedures:

- Remain calm
- **DO NOT** touch, tamper with, or move the item.
- Immediately report the item to the Site Decision Makers and authorities.
- Site Decision Makers must:
    - Make a Threat Assessment. Determine if there is an immediate danger to personnel and if the premises should be evacuated and/or locked down.
    - Ensure area is secured and cleared of personnel.
    - Notify Search Teams.

    - Ensure coordination with local authorities.
    - Communicate with Evacuation and Search Teams and give clear concise instructions.
- Evacuation and Search Teams should remain available, unless instructed otherwise, to inform and assist other personnel with ongoing instructions.

Search Teams will follow the procedures below:

- Search from walls to center of room and from floor to ceiling.
- Look and listen for any item out of the ordinary.
- Any item that is suspicious will immediately be pointed out to the authorities.
- If lights are on, leave them on - If the lights are off, leave them off.

NOTE: The discovery of one suspicious item should not automatically mean the conclusion of a search as there may be additional items present.

Evacuation

- It is always better to be safe. For this reason, all customers and non-essential personnel may be evacuated immediately. This will be coordinated with the proper authorities.
- All employees are to exit calmly and quietly. No pushing or crowding.
- All personnel will be moved to the designated safe areas away from the facility.
- Non-ambulatory, visually impaired, and hearing-impaired persons will be assisted.
- All personnel will be accounted for and the Evacuation Team will confirm the building is empty.
- No one will return until notification is sent that it is safe to return to the facility.

Inspection with Authorities - (If asked for assistance)

- Key employees may assist with a visual inspection of work areas. This is voluntary.
- Search from walls to center of room and from floor to ceiling.
- Look and listen for any item out of the ordinary.
- Any item that is suspicious will immediately be pointed out to the authorities.
- If lights are on, leave them on - If the lights are off, leave them off.

Recovery from a Bomb Threat

- Facts will be gathered as calmly and as systematically as possible. This will allow correct information to be provided to the authorities and management.
- Witness statements will be taken.
- Pictures of the scene will be taken, if applicable.
- Operations will be brought back to normal as soon as possible. If the facility must be closed for a period of time, employees will be notified, and a sign will be posted that states when the facility will reopen.
- All reports will be filed with the proper authorities.

Earthquake Procedure

Before an Earthquake

- We will maintain appropriate emergency supplies (i.e., flashlight, battery powered radio, first-aid kit, food, water, etc.). A list of all employees' phone numbers shall be kept updated and accessible. All employees will survey their work area to locate the area where they will seek shelter during an earthquake.
- A hazard assessment will be conducted of the facility for the following:
    - Since windows/glass tend to shatter during an earthquake, all employees will be made aware of this potential danger.
    - Heavy objects in the facility will be properly secured/anchored to help prevent them from falling in an earthquake. These items will be checked periodically, and any problems will be corrected.

During an Earthquake

REMAIN CALM - Do not panic. All employees will be prepared and trained in protecting themselves as well as helping others with the following procedures:

- DO NOT attempt to go outside.
- ACT QUICKLY - Move away from windows, temporary walls or partitions, freestanding and heavy objects.

- DUCK - Duck or drop down to the floor.
- COVER - Take cover under a sturdy table, desk, or other furniture. If that is not possible, seek cover against an interior wall and protect your head and neck with your arms.
- HOLD ON - If you take cover under a sturdy piece of furniture, hold on and be prepared to move with it.
- STAY PUT - Stay still until the ground and/or building stops shaking and it is safe to move. Do not attempt to exit the building during any shaking.

After the Earthquake

If there is visible damage, proceed as follows:

- CHECK FOR INJURED PERSONS - If there are injuries, call 911 for assistance and administer first-aid as needed.
- CHECK FOR DAMAGE - The facility will be carefully inspected for damage and potentially dangerous situations. Plan for AFTERSHOCKS.
- LIMIT TELEPHONE USE - Leave telephone lines clear for emergency communications only. Check all telephones to make sure the receivers have not been shaken off.
- INFORMATION - Locate a battery-operated radio and/or use cell phones to receive important information and instructions.
- RUMORS - Discourage the spreading of rumors. Misinformation can cause confusion and panic.
- EVACUATION - Follow the evacuation plan:
    - Do not evacuate unless told to do so or if danger is imminent.
    - Follow instructions given by emergency personnel.
    - Walk, DO NOT RUN, and keep noise to a minimum.
    - DO NOT push or crowd. Leave the facility and assemble in the designated safe areas in an orderly fashion. Aid disabled persons and the elderly, if needed.
    - Once relocated to a designated safe area, DO NOT RETURN until you have been notified that it is safe to do so.

Utilities

- ELECTRICITY - It is likely the power will be out.
- GAS - DO NOT shut off gas unless there is a smell of gas present.
- WATER - Assume that the water supply sources are contaminated:
    - Water lines including sewers may be broken. Do not use normal water supplies unless cleared by emergency personnel. Conserve what water is available.
    - Water heater contents may be used as a source of water.
- SANITATION - For sanitary disposal, use plastic trash can liners in toilets; remove after use and store in outside trash area until they can be disposed of by health officials.

Fire Situations

Follow normal fire procedures.

When to go Home

In the event of a disaster during normal working hours, all persons should remain at the facility to ensure their safety. It may be too dangerous to attempt to leave right away. ANYONE WHO INSISTS ON LEAVING DOES SO AT THEIR OWN RISK.

Listen to media reports for areas and roads that have sustained damage. Wait until the roads that you use to return home have been reported not to be damaged and traffic is moving.

In the event of a major earthquake, assistance from emergency personnel may take up to 72 hours. We should be prepared for this possibility.

Recovery from an Earthquake

- Facts will be gathered in a calm and systematic way. This allows for correct information to be provided to the authorities and to management.
- Employees will be contacted as appropriate.
- A visual inspection of the facility will be performed, both inside and outside.
- Affected utilities will be restored when possible.
- The working environment will be brought back to normal as soon as possible. Recovery is important to the well-being of the company and the employees.

- The fire extinguishers will be recharged and the automatic sprinkler system re-certified as necessary.
- Repairs to the facility will be made as quickly as possible. This may require closing the facility for a period of time. Employees will be notified when the facility will reopen.
- All damage will be documented appropriately.
- In the event an earthquake occurs during off-hours; the Program Administrator shall be contacted. When possible and reasonable, the facility will be evaluated for damage by the Program Administrator and Company Management. The results of this evaluation, along with direction from Company Management will determine whether it is safe to open for business.

Thunderstorms, Lightning & Hail Procedures

A thunderstorm affects a relatively small area when compared to a hurricane or a winter storm. The typical thunderstorm is 15 miles in diameter and lasts an average of 30 minutes. Despite their small size, **ALL** thunderstorms are dangerous. Of the estimated 100,000 thunderstorms that occur each year in the United States, approximately 10 percent are classified as severe. The National Weather Service considers a thunderstorm severe if it produces hail at least one inch in diameter, winds of 58 mph or stronger, or a tornado.

All thunderstorms produce lightning and they may also produce:

- Straight-line winds which can exceed 125 mph and can cause the same type of destruction as a tornado.
- Tornadoes which can have wind speeds in excess of 200 mph and be 1 mile wide and stay on the ground over 50 miles. **(Please see Tornado Procedure for additional information.)**
- Flash floods and floods. **(Please see Flood and/or Flash Flood for additional information.)**
- Hail which can be larger than 5 inches in diameter.

Before a Thunderstorm or Severe Thunderstorm

- We will maintain appropriate emergency supplies (i.e., flashlight, battery powered radio, first-aid kit, food, water, etc.). A list of all employees' phone numbers shall be kept updated and accessible.
- We will monitor local radio and/or television stations for information regarding severe weather and warnings as weather conditions warrant.
- We will notify field employees as soon as possible of a severe weather event.

Lightning Safety

According to statics kept by the National Weather Service, the 30 year average for lightning fatalities across the country is 73. Since lightning usually claims only one or two victims at a time, lightning generally does not receive as much attention as other, more destructive weather events. Documented lightning injuries in the United States average 300 per year.

Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall. If you are outdoors and can hear thunder, you are in danger of being struck by lightning. The majority of lightning strike victims were headed to a safe place but waited too long to seek shelter.

- During storms or high winds, ALL outside work will cease.
- If outside, seek shelter in a sturdy, fully-enclosed building with wiring and plumbing as quickly as possible. The interior wiring and plumbing will act as an earth ground. Stay away from windows.
- Do not use electric appliances during the storm. Turn off sensitive equipment such as computers, etc.
- Do not use a corded phone. Telephone use is the leading cause of indoor lightning injuries in the United States.
- Do not shelter in sheds, pavilions, tents, or covered porches as they do not provide adequate protection from lightning.
- Avoid bodies of water. Water does not attract lightning, but it is an excellent conductor of electricity.
- If a fully-enclosed building is not readily available, shelter in a hard-topped metal vehicle with the windows rolled up. Remain in the vehicle for at least 30 minutes after hearing the last sound of thunder. This is important to follow as 50 percent of lightning-related injuries happen after the thunderstorm has passed.
- Notify your supervisor and/or management of your status and for further instructions.

Hail Safety

Storms that produce hailstones the size of dimes or larger can result in dents on cars, damage to roofs, break windows, and could cause fatalities. Large hailstones can fall at speeds faster than 100 mph. There is no guaranteed way to tell whether a thunderstorm will produce hail, but some indications are heavy rain, strong winds, changes in wind direction, and sudden drops in temperatures.

- As stated for lightning safety, seek shelter in a sturdy, fully-enclosed building.
- Stay away from windows as the hail could cause breaking glass.
- If a sturdy building is not available, shelter in a hard-topped metal vehicle with the windows rolled up. Put your head down below the windows, covering your head with your hands, a blanket, or coat if possible.
- Notify your supervisor and/or management of your status and for further instructions.

Flood and Flash Flood Procedure

Before a Flood and/or Flash Flood

- We will maintain appropriate emergency supplies (i.e., flashlight, battery powered radio, first-aid kit, food, water, etc.). A list of all employees' phone numbers shall be kept updated and accessible.
- We will monitor local radio and/or television stations for information about flood watches and warnings as weather warrants.
- We will notify field employees as soon as possible of a flash flood watch or warning.
- The commonly used terms in flood watches and warnings are below:
    - **Flood Watch**: Flooding is possible. Monitor radio and television stations for more information.
    - **Flash Flood Watch**: Flash flooding is possible. Be prepared to move to higher ground. Monitor radio and television stations for more information.
    - **Flood Warning**: Imminent threat – flooding is occurring or will occur soon. If advised to evacuate, do so immediately.
    - **Flash Flood Warning**: Imminent threat. A flash flood is occurring or will occur soon. Seek higher ground on foot immediately.

During a Flood and/or Flash Flood

- Be alert to your surroundings.
- Avoid low water crossings.
- Stay away from creeks, trails, culverts, ponds and other drainage infrastructure.
- Actively look for water over the road.
- Be especially cautious at night when it is harder to spot flood danger.
- **TURN AROUND** if a road is barricaded or if water is over the road. **NEVER** drive over a flooded road. Water over a roadway can conceal damage to the roadway or supporting structure.
- If you are caught on a flooded road without exit and the surrounding waters are rising rapidly around you, get out of the car quickly and move to higher ground. Most cars can be swept away by less than two feet of moving water.
- Call your Supervisor and/or Management for additional instructions.

After the Flood and/or Flash Flood

- After a flood, do not attempt to return to affected areas until officials say it is safe to do so.
- Once you are able to travel, look for loose power lines and damage to roads.
- If you come across power lines, **DO NOT** drive over them or try to move them. If the lines are laying across the road, **TURN AROUND** and find another route.
- If you must enter flood waters be sure to use protective clothing, including rubber gloves and boots.
- Watch out for wild animals, especially poisonous snakes, seeking shelter from the water.

Tornado Procedure

Before a Tornado

- We will maintain appropriate emergency supplies (i.e., flashlight, battery powered radio, first-aid kit, food, water, etc.). A list of all employees' phone numbers shall be kept updated and accessible.

- We will monitor local radio and/or television stations for information about tornado watches and warnings as weather warrants.
- We will notify field employees as soon as possible of a tornado watch or warning.
- The difference between a Tornado Watch and a Tornado Warning:
    - **Tornado Watch**: Tornadoes are possible in and near the watch area.
    - **Tornado Warning**: A tornado has been sighted or indicated by weather radar. Tornado warnings indicate imminent danger to life and property. For office staff go immediately to the bathroom on the lower floor. For field staff, if in a customer's home go the basement or an interior room on the lowest floor with no windows. For staff caught outdoors, do not try to outrun a tornado. Seek shelter in a sturdy building if possible.
- Watch for tornado danger signs during a thunderstorm:
    - Dark, often greenish clouds, a phenomenon caused by hail.
    - Wall cloud, an isolated lowering of the base of a thunderstorm.
    - Cloud of debris.
    - Large hail.
    - Funnel cloud, a visible rotating extension of the cloud base.
    - Roaring noise, similar to a freight train.

During a Tornado Watch

- Be alert to your surroundings.
- Monitor weather reports.
- If you have any concerns regarding the weather, contact your supervisor and/or management for instructions.

During a Tornado Warning

- Office staff and all other employees and visitors will go immediately to an interior room or hallway for shelter.
- Directions for field staff, is as follows:
    - If in a customer's home **THAT IS NOT** a mobile home, go immediately to an interior room on the lowest floor with no windows. This might be a bathroom, closet, or center hallway.
    - If in a customer's home **THAT IS** a mobile home, immediately get in your vehicle, buckle your seatbelt and go to the nearest sturdy building for shelter.
    - If you are in your vehicle and flying debris occurs while you are driving, pull over and park. **NEVER** park under an overpass or bridge as they do not offer any protection from the tornado. **NEVER** try to outrun a tornado. You now have the following options as a last resort:
        - If you can safely get noticeably lower than the level of the roadway, exit your car and lie in that area, covering your head with your hands.
        - Stay in the car with your seatbelt on. Put your head down below the windows, covering your head with your hands, a blanket, or coat if possible.
    - Your choice should be driven by your specific circumstances.

After a Tornado

- Continue to monitor local news for updated weather information and instructions.
- Call 911 if you or someone else requires emergency services.
- Notify your supervisor and/or management of your status and for further instructions.
- If you are trapped, cover your mouth with a cloth or mask to avoid breathing dust. Try to send a text or bang on a pipe or wall instead of shouting.
- Stay clear of fallen power lines or broken utility lines.
- **DO NOT** enter damaged buildings until you are told they are safe to enter.
- Obey all road barriers. **DO NOT** attempt to drive around them. Turn around and find an alternative route.

Emergency Preparedness Training

Individual accidents and major disasters are survivable. But if you are not prepared, more lives may be lost and more people may be injured. If you do not know how to respond, the person who is seriously hurt or even killed may be yourself. For your own protection and for the sake of your family, friends, and coworkers, you must learn and practice the following basics of emergency preparedness:

- Evaluate hazards around your work area: An inspection of all work areas should be conducted. Those hazards that may injure you or another person in an emergency should be identified. For example, unsecured shelving, blocked emergency exits or paper around a gas hot water heater. A complete list should be made of all potential hazards.
- Minimize those hazards under our control: repair or remove every possible hazard that is found in the safety inspection. Another inspection should then take place since the removal of one hazard may uncover another.
- Prepare for hazards under our control: fires and earthquakes are major disasters which can happen with little or no warning. You may only have seconds to get to safety. Knowing ahead of time what to do can help save lives.
- Prepare and maintain an emergency kit: if you live in an earthquake area, prepare an earthquake kit. if you work with chemicals, prepare a chemical exposure kit and so on. All emergency kits should contain first-aid and other supplies you will need to survive the anticipated emergency or disaster you may be exposed to.
- Practice an evacuation plan: practicing an evacuation plan will allow you to adjust the plan before an emergency really happens. This will also help people stay calmer during a real emergency.
- Know how to contact emergency help: telephone numbers and hospital addresses should be clearly posted at all emergency telephones.

The final step to emergency preparedness is to put these plans into effect now. An emergency can happen at any moment, day or night, at home or at work. These situations are unpredictable so tomorrow may be too late.

Fire Safety

Much of fire safety is common sense and prevention is still the best defense against fire. The few minutes it takes to inspect an electrical cord, turn off an electrical appliance, or move a can of solvent away from a heat source may save a life or a business. Because fires can be so devastating and spread so quickly, you must take responsibility for your own safety and those around you by following these safety precautions:

- Learn how to use fire extinguishers: employees must know where all fire extinguishers are located and be trained in their proper use. They must also know when not to fight a fire which can threaten their life.
- Practice evacuation plan: practicing ahead of time will help all workers stay calm during an actual fire. Use a written or drawn evacuation plan where all employees will meet at a designated safe area.
- Conduct regular fire safety inspections: make monthly inspections to identify potential fire hazards including electrical products, equipment, and extension cords. Correct and report any problems found.
- Keep aisles and exits clear: keep aisles clear of boxes, supplies, and other obstacles. Fire exits must be unlocked and clear. Fire escapes must be accessible and operational.
- Do not overload circuits: when overloaded, wires, fuses, and circuits get hot and can ignite the materials around them.
- Keep combustibles away from any heat source: this includes flammable liquids, newspapers, cardboard, clothing, etc., no matter how low the heat source's temperature.
- Do not clean with flammable liquids: gasoline, alcohol, and other flammable liquids are dangerous when used as cleaning agents. Dispose of all combustible materials, including oil, grease, solvent, or paint-filled rags, in proper sealed containers.
- Use care with smoking materials: properly extinguish all smoking materials and dispose of them in suitable containers such as ashtrays. Never leave cigarettes or cigars burning and unattended.

Accidental or uncontrolled fires do not distinguish between worthless property and human life. While the above steps can not anticipate all conditions which lead to a fire, they will help prevent many of the most common fires from starting. Above all, the fire you prevent may be the one that saves your business or your life.

Emergency Medical Service Plan:

Our company has developed the following Emergency Medical Service Plan in compliance with OSHA regulations.

Program Implementation and Responsible Person

Doneta Schlaepfer has been assigned as the Program Administrator who will oversee implementing and maintaining this Emergency Medical Services Plan (EMSP) and all aspects of this plan for our company.

The Program Administrator will be responsible for implementing the following functions and duties of the EMSP:

- Provision of services.
- Appropriate trained personnel.
- First-Aid kit.
- Informing employees of emergency procedures.
- Obtaining emergency medical services.
- Emergency washing facilities.
- Emergency call systems.
- Multi-employer worksites.
- Documentation.

Provision of Services

The Program Administrator shall ensure that each construction site has planned for and has made available, emergency services for our employees. The emergency medical services that have been designated shall be adequate to cover our workforce for each construction site, no matter how many employees are working at the site.

Appropriately Trained Personnel

The Program Administrator in conjunction with the construction site supervisor(s) shall ensure that an adequate number of appropriately trained persons are available at the job sites to render first-aid. A minimum of one person shall be available at each construction site. Each employee trained in first-aid shall be provided training that is equivalent to the training provided by the American Red Cross. All appropriately trained persons shall follow universal precautions when providing first-aid to anyone injured on the job.

First-Aid Kit

At least one first-aid kit in a weather-proof container shall be provided for each construction site. The first-aid kit shall be stored in a location that is easily accessible and known to all employees as required by OSHA Appendix A to 1910.151(b).

The contents of the first-aid kit shall be regularly inspected by the site supervisor or the Program Administrator to ensure that all expended and used items are promptly replaced. The contents shall also be inspected to ensure that they are kept in a sanitary and usable condition and to ensure that all supplies are within their expiration dates, if applicable. The contents of the first-aid kits shall be arranged so that the necessary items are found quickly. First-aid dressings shall be sterile and kept in individually sealed packages.

The minimum first-aid supplies shall be determined by a licensed physician authorized by our company or in accordance with the following table developed by the American National Standards Institute (ANSI) “Minimum Requirements for Workplace First-Aid Kits (Revision 2015) and enforced by OSHA:

ANSI Z308.1-2015 Required Contents

In order to be ANSI Compliant, First-Aid Kits must contain **AT A MINIMUM** the following components:

2015 ANSI Class A Minimum Fill Requirements	**2015 ANSI Class B Minimum Fill Requirements**
Quantity Item and Minimum Size or Volume	**Quantity Item and Minimum Size or Volume**
16 Adhesive Bandages, 1" x 3"	50 Adhesive Bandages, 1" x 3"
1 Adhesive Tape, 2.5 yd.	2 Adhesive Tape, 2.5 yd.
10 Antibiotic Treatment, 0.14 fl. oz. (0.5g) applications	25 Antibiotic Treatment, 0.14 fl. oz. (0.5g) applications
10 Antiseptic, 0.14 fl. oz. (0.5g) applications	50 Antiseptic, 0.14 fl. oz. (0.5g) applications
1 Breathing Barrier	1 Breathing Barrier
1 Burn Dressing, 4" x 4"	2 Burn Dressing, 4" x 4"
10 Burn Treatment, 1/32 oz. (0.9g) applications	25 Burn Treatment, 1/32 oz. (0.9g) applications
1 Cold Pack, 4" x 5"	2 Cold Pack, 4" x 5"
2 Eye Coverings	2 Eye Coverings
1 Eye Wash, 1 oz.	1 Eye Wash, 4 oz.
1 First Aid Guide	1 First Aid Guide
6 Hand Sanitizer, 1/32 oz. (0.9g) applications	10 Hand Sanitizer, 1/32 oz. (0.9g) applications
4 Medical Exam Gloves	8 Medical Exam Gloves
1 Roller Bandage, 2" x 4 yd.	2 Roller Bandage, 2" x 4 yd.
1 Scissors	1 Roller Bandage, 4" x 4 yd.
2 Sterile Pads, 3" x 3"	1 Scissors
2 Trauma Pads, 5" x 9"	1 Padded Splint, 4" x 24"
1 Triangular Bandage, 40" x 40" x 56"	4 Sterile Pads, 3" x 3"
Class A kits with contents designed to deal with most common types of workplace injuries. **Class B** kits with a broader range and quantity of supplies to deal with injuries in more complex or high-risk environments.	1 Tourniquet, 1"
	4 Trauma Pads, 5" x 9"
	2 Triangular Bandage, 40" x 40" x 56"

We shall keep other supplies and equipment available based on the extent of the emergency care that may be rendered for anticipated injuries and illnesses and the availability of transportation to medical care. Some supplies will be based on our proximity to emergency medical services and/or ambulance services. If we are working at a remote construction site and are more than 30 minutes away from ambulance service, we shall have a stretcher and blankets or other adequate warm covering available at the job site.

For our structures of five floors or more (48 feet) in height or depth, we will also have at least one basket or appropriate litter with straps available to transport employees out of the facility. We shall also have at least 2 blankets available with the basket or litter.

Drugs, antiseptics, eye irrigation solutions, inhalants, medicines or proprietary preparations, shall not be included in first-aid kits unless specifically approved, in writing, by the licensed physician authorized by our company.

Informing Employees of Emergency Procedures

All employees in our company shall be informed of the procedures to follow in case of injury or illness. All emergency contact numbers shall be listed on the emergency posting notification and reporting procedures. This notification shall be readily accessible for all employees on every construction site.

Obtaining Emergency Medical Services

At each construction site we shall have an effective communication system for contacting emergency medical services, i.e. hospital, ambulance, and fire. This system can be a job site telephone, telephone switchboard, two-way radios, or cell phones, if reception is readily available at the site. The emergency posting notification and reporting procedures previously mentioned shall be located next to any permanent communication means or be made available to all employees on the site. The following telephone numbers shall be posted on the notification:

- A physician and at least one alternate, if available.
- Hospitals.
- Ambulance services.
- Fire-protection services.

If a communication system cannot be implemented at the site, then the proper equipment for the prompt transportation of the injured or ill employee to an emergency medical facility shall be provided and maintained at the site.

Emergency Washing Facilities

Emergency washing facilities shall be provided in the facility if there is an exposure to injurious or corrosive materials. This emergency washing facility shall be immediately available and provide for quick drenching and flushing of the employee's eyes and body.

Emergency Call Systems

For our structures of five floors or more (48 feet) in height or depth, a two-way communication system or other acceptable means of communicating shall be installed and be operable. This system shall be used to notify all persons designated in the EMSP. It will be periodically checked to verify it is in operating condition. If used in an emergency, the location and condition of the injured shall be able to be communicated over the system and be easily understandable by the receiving party.

In addition to the call system, the use of a construction passenger elevator for medical emergencies at construction sites whose structures of five floors or more (48 feet) in height or depth shall take precedence over all other use.

Multi-Employer Worksites

Many of the areas covered under this plan are applicable for sites where multiple employers have employees working. If agreeable by the multiple employers on the site, the entities can combine their resources to ensure the availability of medical services for all employees on the construction site and combine their first-aid trained personnel to cover the entire construction site by forming an available pool of trained personnel. The Program Administrator shall ensure that there is adequate coverage for all employees if we do combine with other employers on the site.

Documentation

The Program Administrator shall have a written plan to provide emergency medical services. The plan shall specify the means of implementing all applicable requirements listed above. A copy of this program shall be readily accessible at all construction sites and in our office. Copies of all training records and certifications will also be kept by our company.

Fire Prevention Plan:

Our company has developed the following written Fire Prevention Plan (FPP) in compliance with OSHA Safety Orders.

The following elements are included in this FPP:

- Program implementation.
- Maintenance of the FPP.
- Supervisor's responsibilities.
- Identification of potential fire hazards and other potential ignition sources.
- Proper handling and storage procedures.
- Control procedures.
- Maintenance of fire control systems and equipment.
- Housekeeping.

Program Implementation

Doneta Schlaepfer has been designated as the Program Administrator in charge of implementing this Fire Prevention Plan (FPP). The Program Administrator will also be responsible for the maintenance and periodic review of the FPP to ensure it is current, implemented, and working properly for our company.

The Program Administrator will be responsible for all the elements of the FPP as well as maintaining the records of employee training, fire protection inspections, equipment maintenance, and actions taken to enforce fire prevention.

Maintenance of the Fire Prevention Plan

The Program Administrator shall review annually all aspects of this FPP to ensure that it has been properly implemented and is working properly for our company as we currently operate.

Supervisor's Responsibilities

Supervisors are responsible for assisting the Program Administrator with maintaining compliance with the FPP and establishing procedures that are location or job site specific. All supervisors will have ready access to this program for reference purposes.

At all locations and specific job sites, supervisors will assist the Program Administrator in the following functions:

- Maintain procedures for the FPP.
- Establish proper procedures for storage of combustible and flammable materials.
- Conduct fire safety inspections.
- Provide notification and training to employees.
- Conduct at least annual inspections of fire suppression equipment.
- Train employees on proper use of fire suppression equipment.
- Continued enforcement of the FPP.
- Ensure subcontractors follow OSHA requirements.

Identification of Potential Fire Hazards

The Program Administrator and assigned supervisors are responsible for identifying potential fire hazards and other ignition sources and for establishing proper guidelines for storage and handling of flammable or combustible materials. The Program Administrator is also responsible for training supervisors on all the procedures of this FPP.

Fire safety inspections shall be conducted periodically and in accordance with our regularly scheduled inspection intervals. These inspections shall be used to identify and/or review any open flames, smoking areas, operations, or other potential fire hazards or ignition sources, to ensure that the proper control measures have been put in place to prevent the potential

for fires within our facility. We will also use these inspections to determine if less hazardous equipment or materials may be substituted to further reduce our exposure.

Proper Handling and Storage Procedures

Supervisors are responsible for developing guidelines and enforcing procedures with respect to the handling and storage of flammable or combustible materials at all job sites.

- All flammable and combustible materials shall be kept in closed containers and properly stored in fire-proof cabinets.
- Materials that react with water shall not be stored in the same room or cabinet with flammable or combustible materials.
- Flammable and combustible materials will not be used adjacent to any open flame or another source of ignition. This includes the path of any vapor travel, when applicable.
- All leakage or spillage of flammable or combustible materials shall be cleaned up immediately and disposed of promptly and safely.
- No Flammable or combustible materials shall be stored in a way that would limit the use of exits, stairways, or areas normally used to exit our facilities.
- Smoking areas shall be located 50 feet away from any potential fire hazard or another ignition source.

Fire prevention guidelines are incorporated into our company's Code of Safe Practices to ensure that all our employees receive notification of our FPP guidelines. This is in addition to the required training for all employees of our company.

Fire Control Procedures

The Program Administrator and any assigned supervisors shall be responsible for conducting thorough facility inspections on a periodic basis to ensure that the proper control procedures are in place to prevent fires related to the materials and/or processes of our company. In our facility, we have the following control procedures in place:

Fire Control Measures:

Any/all Fire Control Systems and firefighting equipment shall be unobstructed and easily accessible. All such fire control measures shall be conspicuously located or conspicuously marked for easy identification in case of emergency. They shall also be maintained in operating condition or immediately replaced upon being revealed/discovered to be nonoperational or faulty.

Maintenance of Fire Control Systems/Equipment

As previously stated, the Program Administrator and any assigned supervisors, will be responsible for conducting monthly inspections of the company's fire control measures. This includes at a minimum a monthly documented visual inspection of all fire extinguishers located in company buildings, jobsites and work vehicles. The monthly inspection will ensure the extinguisher's pin is in place, is charged, and the casing is not rusted or corroded. In addition to these monthly inspections, we may contract with outside vendors to inspect, maintain, service, or repair our fire control systems/equipment on a yearly basis which will include all fixed systems.

All fixed fire suppressant systems shall be inspected and maintained at least annually to ensure they are operating properly and will activate in the event of an emergency. The Program Administrator shall regularly review and ensure proper maintenance of all systems and equipment that has been installed in our facility to prevent accidental ignition of flammable and combustible materials.

Housekeeping

The accumulation of flammable or combustible waste will be controlled through proper housekeeping procedures. it is our policy to properly dispose of all flammable or combustible waste that is no longer needed in our operations. We will keep account of the flammable and combustible material used in our operations and any waste that is left over or is produced by these operations. The waste material may be stored temporarily until it can be disposed of properly. The amount of waste material will be noted as part of our periodic safety inspections. This will help us determine when to properly dispose of it.

Most of the waste materials shall be disposed of through regular disposal channels while others may have to be disposed of through an outside waste disposal company.

Training

The Program Administrator shall oversee all training related to the FPP. Supervisors will be responsible for providing training to employees on the FPP and ensure these procedures are implemented to assure workplace safety. The training shall at a minimum consist of the following areas:

- All employees shall be informed of the fire hazards of all material and/or process to which they are exposed.
- The training shall take place upon initial assignment of the employee and conducted annually thereafter.
- The training shall cover the parts of the FPP that the employee must know to protect himself/herself, including any fire extinguishing equipment provided by the company, in the event of an emergency.
- The training shall also include familiarizing the employee with the general principles of fire extinguisher use and the hazards associated with basic firefighting.
- The written plan shall be kept readily accessible and available for employee review.

Multi-Employer Work-Site

The Program Administrator and any assigned supervisors will be responsible for ensuring that all other employers working in the same location or facility follow these OSHA requirements and that proper fire prevention measures are implemented.

Fleet Safety Program:

Fleet Safety Policy

Many employees of Gering Valley Plumbing & Heating, Inc. are required to operate company owned, leased, rental, or personal vehicles as part of their job. Employees are expected to operate vehicles safely to prevent accidents which may result in injuries and property loss. It is the policy of Gering Valley Plumbing & Heating, Inc. to provide and maintain a safe working environment to protect our employees and the citizens of the communities where we conduct business from injury and property loss. The company considers the use of automobiles part of the working environment. The company is committed to promoting a heightened level of safety awareness and responsible driving behavior in its employees. Our efforts and the commitment of our employees will prevent vehicle accidents and reduce personal injury and property loss claims. This program requires the full cooperation of each driver to operate their vehicle safely and to adhere to the responsibilities outlined in the Fleet Safety Program. Elements of this program include:

- Organization and responsibilities.
- Vehicle use guidelines.
- Accident record keeping, reporting, and analysis.
- Vehicle selection, inspection, and maintenance.
- Training standards.
- Safety regulations.

Management and employees are responsible for meeting and maintaining the standards set forth in this program. This policy applies to employees who operate vehicles on company business and will be reviewed by managers and supervisors to ensure full implementation and compliance.

Organization and Responsibilities

Program Administrator

Doneta Schlaepfer has been designated as the Program Administrator and is responsible for successful implementation and on-going execution of this program.

- Implement and maintain the Fleet Safety Program.
- Establish measurement objectives to ensure compliance with the program.
- Provide or develop systems of accountability, training, and practical adjustments to the program ongoing with the coordination and support of all affected employees.
- Maintain appropriate records including training, accident reports and analysis, employee feedback, and disciplinary actions taken.

Drivers

- Always operate a motor vehicle in a safe manner as provided in the Fleet Safety Program as well as periodic training issued by the Program Administrator.
- Maintain a valid driver's license and notify the Program Administrator of any incidents such as accidents, moving violations, parking tickets, or anything else that occur ON OR OFF the clock that may impact maintaining said valid driver's license or insurance coverage.
- Maintain assigned vehicles per established maintenance standards and schedules.

Vehicle Use Guidelines

Passenger Cars

Only employees authorized by the Program Administrator and/or management will be permitted to operate a passenger car. If/when the vehicle is driven for personal use, only the employee will be permitted to operate the vehicle.

Commercial Vans and Trucks

Employees with the appropriate commercial driver's license, (if required by DOT standards based on specific make/model of the vehicle), will receive authorization to drive commercial vans and/trucks from the Program Administrator and/or management. Off the clock personal use of commercial vans/trucks is strictly prohibited.

Unauthorized Use of Vehicles

Assigned drivers and other employees authorized by the Program Administrator and/or management to drive company vehicles will not allow an unauthorized individual to operate a company vehicle. **No exceptions!** Violation will result in disciplinary action up to and including termination. Additionally, if unauthorized use of a company vehicle results in an accident specifically including damage to customer or company property, the responsible employee will be required to make financial restitution for any damages in addition to potential disciplinary action.

Contractors and Temporary Hire Employees

Contractors and temporary employees will be treated as company employees and will comply with the requirements of this program. Failure to meet all requirements will result in the immediate loss of driving privileges.

Accident Record Keeping, Reporting and Analysis

This company considers elimination of motor vehicle accidents as a major goal. To meet this objective, all accidents will be reported to the Program Administrator. All accidents will then be investigated, documented, and reviewed by the Program Administrator. The investigation identifies the need for:

- A more intensive driver training and/or remedial training.
- Improved driver selection procedures.
- Improved vehicle inspection and/or maintenance activities.
- Changes in traffic routes.

Motor vehicle accident record keeping procedures will consist of the following components:

- Documentation of causes and corrective action taken.
- Program Administrator review to expedite corrective action.
- Analysis of accidents to determine trends, recurring problems, and the need for further control measures.

Responsibility

Implementation of these procedures remains the responsibility of both the driver and Program Administrator.

Driver: Since the driver is the first person at the accident scene, he/she will initiate the information-gathering process as quickly and thoroughly as is feasible.

Program Administrator: Will obtain accident data from the driver through the Transportation Accident Report form and/or by verbal communication. It is important for the Program Administrator to determine the extent of the accident, especially if it involves injury or death to the driver, passengers, or other parties. The Program Administrator will also immediately proceed with a formal investigation to determine the underlying causes as well as what can be done to prevent similar occurrences. The accident report along with any additional support data (e.g., witness statements, photographs, police reports, etc.) will be forwarded to the applicable insurance claims office and/or law enforcement agency.

Driver Participation in Repair Costs: Depending on the circumstances, employees may be held financially liable for any deductibles associated with repairing company-owned vehicles when those repairs result from a motor vehicle

accident determined to be caused by an employee's negligent or criminal behavior. Determination of whether an accident was ultimately 'preventable' or not will be solely at the discretion of the Program Administrator and/or management.

*Preventable/Non-Preventable Accidents - The following definitions relate to motor vehicle accidents:

- A motor vehicle accident is defined as "any occurrence involving a motor vehicle which results in death, injury, or property damage, unless such vehicle is properly parked. Who was injured, what property was damaged and to what extent, where the accident occurred or who was responsible are not relative factors".
- A preventable accident is defined as "any accident involving the vehicle, unless properly parked, which results in property damage or personal injury and in which the driver failed to do everything he/she reasonably could have done to prevent or avoid the accident".
- A properly parked motor vehicle is one that is completely stopped and parked where it is legal and prudent to park such a vehicle or to stop to load/unload property. Vehicles stopped to load/unload passengers are not considered parked.
- Parking on private property will be governed by the same regulations that apply on public streets and highways. A vehicle stopped in traffic in response to a sign, traffic signal, or the police is not considered parked.

Employee Accident Reporting Procedure

Employees will take the following actions when there are injuries to persons and/or damage to other vehicles or property:

- If possible, move the vehicle to a safe location out of the way of traffic. Call for medical attention if anyone is hurt.
- Secure the names and addresses of drivers and occupants of any vehicles involved, their operator's license numbers, insurance company names and policy numbers, as well as the names and addresses of injured persons and witnesses. Provide this information to the Program Administrator ASAP. Do not discuss fault with or sign anything for anyone except an authorized representative of Gering Valley Plumbing & Heating, Inc., the company's insurance company or a police officer.
- Immediately notify the Program Administrator. If any injuries were involved and the Program Administrator is not available, contact any member of management immediately.
- The Program Administrator will instruct you how to arrange for repairs to the vehicle. Do not have the vehicle repaired until you receive authorization from the Program Administrator.

When there is theft of or damage to your vehicle only:

- As soon as the results of theft and/or company property damage is seen/identified, you must notify the local police department immediately.
- As soon as possible after contacting authorities, notify the Program Administrator of any/all information about the situation.
- The Program Administrator will instruct you how to arrange for repairs or replacement of the vehicle. Do not have the vehicle repaired until you receive authorization from the Program Administrator.
- Send a copy of the police report along with a memo outlining any additional information to the Program Administrator.

Accident Review Process

All vehicle collisions should be analyzed, and a written report developed by the Program Administrator for management to review. The Program Administrator AND involved drivers should each participate in the analysis. Program Administrator deficiencies and/or lack of Program Administrator action should also be accounted for as part of the accident review. The Program Administrator's responsibility is not only for the employee's safety, but the safety of the general public as well. The purpose of this report is to assist in making a final determination of accident preventability.

Where the collision is found to be directly caused by the company driver's negligent or criminal behavior, the driver may be required to be counseled, given additional training, charged for applicable repair costs, placed on probation, transferred to non-driving duties, disciplined in other ways, placed on unpaid suspension or have their employment terminated based on the severity of the accident and/or employee's driving history.

All parts of an incident investigation and analysis shall be conducted as close to the time of the incident as possible.

Vehicle Selection, Inspection and Maintenance

Introduction

Proper selection and maintenance of equipment are important aspects of this program. Reduced operational costs and accidents from vehicle defects are the direct result of a well implemented maintenance policy.

Vehicle Selection

Selection of vehicles begins with understanding that the wrong equipment can result in excessive breakdowns, create hazards to personnel, incur costly delays and contribute to poor service and customer complaints. The company will purchase vehicles designed for their intended use.

Vehicle Inspection

The employee responsible for the vehicle will inspect the vehicle using a provided Vehicle Inspection Report form and, on a timetable, set by the Program Administrator. More frequent inspections and reports may be required based on heavy use.

Vehicle Maintenance

Vehicle maintenance can take the form of three distinct programs: preventive maintenance, demand maintenance and crisis maintenance. While all three types have their role in the Fleet Safety Program, the most cost-effective control is preventive maintenance. The groundwork for a good preventive maintenance program starts with the Program Administrator. A review of the manufacturer's specifications and recommendations for periodic preventive maintenance should be integrated with the actual experience of the vehicle.

- Preventive maintenance (PM) is performed on a mileage or time basis. Typical PM includes oil/filter changes, lubrication, tightening belts and components, engine tune-ups, brake work, tire rotation, hose inspection/replacement and radiator maintenance.
- Demand maintenance is performed only when the need arises. Some vehicle parts are replaced only when they actually fail. These include light bulbs, window glass, gauges, wiring, air lines, etc. Other "demand maintenance" items involve vehicle components that are worn based on information from the vehicle condition report. These include tires, engines, transmissions, universal joints, bushings, batteries, etc. Since these situations are identified through periodic vehicle inspection, they can actually be classified within the PM program.
- Crisis maintenance involves a vehicle breakdown while on the road. While situations of this type may happen regardless of the quality of the PM program, it is an expensive alternative to not having an effective preventive maintenance program in place. Crisis maintenance situations should be minimized through proper PM procedures.

Record Keeping

This company's vehicle selection, inspection and maintenance program is only as good as its record keeping procedures. Employees will forward all vehicle maintenance records for maintenance performed each quarter to the Program Administrator.

Training Standards

Drivers hired by this company to operate a motor vehicle will have the basic skills and credentials necessary to perform this function as confirmed through the driver selection process. New employees, contractors and temporary hires will review this program as part of their initial orientation. A formal orientation program is established to help ensure all drivers are presented with the company policy, understand their responsibilities and are familiarized with their vehicle. Areas that must be addressed with the driver include:

- Understand, review and given a copy of the Fleet Safety Program.
- Understand accident reporting and emergency procedures.
- Review operation and controls of vehicle being assigned.
- Inspect vehicle using Vehicle Inspection Form.

License Suspension

Drivers must notify the Program Administrator if their license is suspended or revoked.

Remedial Training

Drivers may be required to attend a safe driving school (National Safety Council Defensive Driving course or equivalent) or an alcohol/drug abuse program if a review of the driver's MVR indicates:

- One or more violation convictions within any one-year period.
- A conviction for driving while under the influence of alcohol or drugs.

Also, depending on the severity of the conviction, the employee's driving privileges may be revoked and/or may result in employment termination.

Safety Regulations

Safety Belts

The driver and all occupants are required to wear safety belts when the vehicle is in operation or while riding in a vehicle. The driver is responsible for ensuring passengers wear their safety belts. Children under four years of age or under 40-pounds in weight must be secured in a DOT approved child safety seat.

Impaired Driving

The driver must not operate a vehicle at any time when his/her ability to do so is impaired, affected, influenced by alcohol, illegal drugs, prescribed or over-the-counter medication, illness, fatigue or injury.

Traffic Laws

Drivers must abide by the federal, state and local motor vehicle regulations, laws and ordinances.

Vehicle Condition

Drivers are responsible for ensuring the vehicle is maintained in safe driving condition. Drivers of daily rentals should check for obvious defects before leaving the rental office/lot and, if necessary, request another vehicle if the first vehicle is deemed unsafe by the employee. Drivers are encouraged to rent vehicles equipped with air bags and ABS brakes, where available.

Cellular Telephones and other Mobile Devices

No driver shall use cell phones (even hands-free options) or any other electronic device while driving. Refer to the Gering Valley Plumbing & Heating, Inc.'s employee handbook for the detailed policy regarding use of mobile & hands-free devices in company vehicles.

General Safety Rules

Employees are not permitted to:

- Pick up hitchhikers.
- Accept payment for carrying passengers or materials.
- Use any radar detector, laser detector or similar devices.
- Push or pull another vehicle.
- Transport flammable liquids or gases unless a DOT or Underwriters' Laboratories approved container is used, and only then in limited quantities.
- Assist disabled motorists or accident victims beyond their level of medical expertise. If a driver is unable to provide the proper medical care, he/she must restrict his/her assistance to calling the proper authorities. Your safety and well-being are to be protected at all times.

Company and Personal Property

Employees are responsible for company property such as computers, work papers and equipment under their control. The company will not reimburse the employee for stolen personal property.

Hazard Communication Program:

To enhance our employee's health and safety, our company has developed, implemented, and maintains a hazard communication program as required by OSHA Hazard Communication Regulations. This Hazard Communication Program Administrator, Doneta Schlaepfer, has full authority and responsibility for implementing and maintaining this program. We provide information about the hazardous substances in our workplace, the associated hazards and the control of these hazards through a comprehensive hazard communication program that includes the elements listed below.

OSHA has mandated the transition to the Global Harmonized System (GHS). This transition involves changes to the Material Safety Data Sheets or MSDS (now to be known simply as Safety Data Sheets or SDS) as well as hazardous material labeling requirements. If at ANY time you have questions about the status of the hazardous materials you are using or the associated documentation on file, notify Doneta Schlaepfer immediately.

List of Hazardous Substances

The Program Administrator will gather and keep current an inventory list of all known hazardous substances present in our workplace and its corresponding Safety Data Sheet (SDS). Each hazardous substance on our inventory list should have the same name as shown on its corresponding SDS. Specific information on each noted hazardous substance can be obtained by reviewing the corresponding SDS. The SDS will be kept in a separate, clearly marked binder, readily available to all employees and/or their designated representatives. Alternative methods shall be used, i.e. electronic file share, hardcopy in company vehicles, etc., to ensure maximum accessibility to this information by employees who regularly work away from the main facility.

Safety Data Sheets (SDS)

The Program Administrator is responsible for obtaining the SDSs, reviewing them for completeness, and maintaining the data sheet system for our company. In the review of incoming data sheets, if new and significant health/safety information becomes available, this new information is passed on immediately to the affected employees by additional training sessions, posting of memos, and other means of communication.

Legible SDS copies for all hazardous substances to which employees of this company may be exposed will be readily available to all employees for review in their work area and during each work shift. The SDS file will also be made available, upon request, to employees and/or their designated representatives.

If we use alternative access methods other than paper SDSs (computer, mobile device, etc.) we will make sure that employees have ready access to and know how to operate these devices for the retrieval of required hazardous material information.

Labels and Other Forms of Warning

Gering Valley Plumbing & Heating, Inc. shall not remove or deface existing labels on incoming containers of hazardous chemicals unless the container is immediately marked with the required information.

Before hazardous substance containers are released to the work area, it is the policy of our company that the Program Administrator will verify that all primary and secondary containers are labeled (at a minimum) as follows:

- Ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.
- Identity of the hazardous substance(s).
- Applicable Hazard Warning Label that contains signal word, hazard statement(s), pictogram(s) and precautionary statement(s).
- Name, address and telephone number of the manufacturer or other responsible party.

All secondary containers will follow the same labeling procedures as above unless the substance is to be used immediately by the employee who performed the transfer.

Employee Information and Training

Employees are to attend a health and safety training session set up by the Program Administrator prior to starting work. This training session will provide information on the following:

- The requirements of the hazard communication regulations, including the employees' rights under the regulations.
- The location and availability of the written hazard communication program.
- Methods and observation techniques used to determine the presence or release of hazardous substances in the work area.
- The physical and health hazards of the substances in the work area and the measures they can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous substances, such as appropriate work practices, emergency procedures, personal protective equipment to be used, and the protective practices the company has taken to minimize or prevent exposure to these substances.
- Details of the hazard communication program developed by the employer, including an explanation of the labeling system and how to read the safety data sheets and how employees can obtain and use the appropriate hazard information.
- Physical and health effects of the hazardous substances.
- Symptoms of overexposure.
- Measures employees need to put into practice to reduce or prevent exposure to these hazardous substances by engineering controls, work practices, and use of personal protective equipment.
- Emergency and first-aid procedures to follow if employees are exposed to hazardous substances.
- How employees can obtain more information on the safety hazards and controls of chemicals used in the workplace.
- The location and interpretation, if needed, of warning signs or placards to communicate that a chemical known to cause cancer or reproductive toxicity is used in the workplace.

Employees will receive additional training when a new hazard is introduced into the workplace or whenever employees might be exposed to hazards at another employer's worksite.

Hazardous Non-Routine Tasks

Periodically, our employees are required to perform hazardous non-routine tasks such as periodic maintenance jobs. Prior to starting work on such projects, affected employees will be given information and trained by their supervisor on hazards to which they may be exposed to during such an activity. This information will cover:

- Specific hazards.
- Measures the company has taken to reduce the risk of these hazards, such as providing ventilation, ensuring the presence of another employee, providing a respiratory protection program, and establishing emergency procedures.
- Required protective/safety measures.

Labeled/Unlabeled Pipes (if applicable)

Above-ground pipes that do not contain hazardous substances but may have associated hazards if disturbed or cut (e.g., steam lines, oxygen lines, etc.) shall be addressed. Before employees enter the area and initiate work, they will be informed of the following:

- The location of the pipe or piping system or another known safety hazard.
- The substance in the pipe.
- Potential hazards associated with the piping.
- Safety precautions when working with or around the piping.

Informing Contractors

To ensure that outside contractors work safely at our worksites and to protect our employees from chemicals used by outside contractors, the Program Administrator is responsible for giving and receiving the following information from contractors:

- Hazardous substances to which they may be exposed to while on the job site, as well as substances they will be bringing into the workplace. To this end, we will provide contractors, via email, electronic file share, or hard copy, with information on our labeling system and access to SDSs and vice versa.
- Precautions and protective measures the employees may take to minimize the possibility of exposure. **(See Spill Management and Personal Protective Equipment (PPE) for further information.)**

Hearing Conservation Program:

This program is designed to provide policies and procedures to comply with OSHA regulations for Occupation Exposure to Noise and Hearing Conservation. Doneta Schlaepfer, the Program Administrator, shall administer a continuing and effective Hearing Conservation Program whenever noise exposure levels equal or exceed an 8-hour time weighted average (TWA) of 85 decibels measured on the A- scale (dBA) or a dose of 50 percent. Noise levels shall be monitored to determine if the OSHA regulations have been correctly followed.

If exposures between 85 dBA and 90 dBA on an 8-hour time weighted average have been recorded, this requires the development of a hearing conservation program and the voluntary use of hearing protection devices.

If exposures in excess of 90 dBA on an 8-hour time weighted average have been recorded, mandatory use of hearing protection is required. Feasible engineering and administrative controls and a hearing conservation program shall be implemented. Impulse or impact noise levels over 140 dBA also dictate the preceding requirements as well.

Monitoring

- When information indicates that any employee's exposure may equal or exceed an 8-hour time weighted average of 85 decibels, we shall obtain measurements for employees who may be exposed at or above that level.
- The monitoring requirement shall be met either by area monitoring or personal monitoring that is representative of the employee's exposure.
    - The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protections.
    - Where circumstances such as high worker mobility, significant variations in sound level or a significant component of impulse noise make area monitoring generally inappropriate, we shall use representative personal sampling to comply with the monitoring requirements of this section unless we can show that area sampling produces equivalent results.
    - All continuous, intermittent and impulsive sound levels from 80 to 130 dBA shall be integrated into the computation.
    - Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.
- Monitoring shall be repeated whenever a change in production, process, equipment, or controls, increases noise exposures to the extent that:
    - Additional employees may be exposed at or above the action level.
    - The attenuation provided by hearing protection being used by employees may be rendered inadequate to reduce the noise exposure to less than 90 dBA.
- We shall provide affected employees or their representatives with an opportunity to observe any measurements of employee noise exposure which are conducted pursuant to this section.
- We shall notify each employee exposed at or above the action level of the results of the monitoring.
- Full shift testing will be the preferred testing period although shorter testing durations for specific purposes will be allowed as long as the results are extrapolated into an 8-hour time weighted average either by the instrument or manually.
- Records of all noise level monitoring shall be maintained as part of our Hearing Conservation Program.

Implementation of Control Measures

Based on the monitoring results for our facility, applicable measures shall be implemented. All monitoring results will be documented as well as the types of implemented control measures. If noise exposures exceed 90 dBA or if there is a measured impulse or impact noise that exceeds 140 dBA, each of these situations shall be evaluated to determine if feasible engineering or administrative controls can be implemented. Hearing protection shall be mandatory and used as an interim control during the installation of engineering controls or implementation of administrative controls as previously determined. If the engineering or administrative controls fail to reduce the exposure levels to less than 90 dBA, hearing protection shall be mandatory.

Audiometric

Audiometric Testing Program

- We shall establish and maintain an audiometric testing program as provided in this section by making audiometric testing available to all employees whose exposures equal or exceed 85 dBA on an 8-hour time weighted average.
- The program shall be provided at no cost to employees.
- Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining, and checking calibration and proper functioning of the audiometers being used. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or physician.
- All audiograms obtained pursuant to this section shall meet the requirements of the OSHA guidelines for audiometric measuring instruments.
- We shall establish for each employee exposed at or above the action level a valid baseline audiogram against which subsequent audiograms can be compared.
- Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. This requirement may be met by wearing hearing protection which will reduce the employee's exposure to a sound level of 80 dBA or below.
- We shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.
- Audiometric tests shall be made available to employees within 6 months of an employee's first exposure at or above the action level, except were a mobile test van is used to conduct the audiometric test, the test shall be made available within one year of an employee's first exposure at or above the action level provided that all such employees are given an opportunity for testing.
- If we choose to have audiometric tests performed by a mobile test van and an employee's baseline audiogram has not been obtained within 6 months of the employee's first exposure at or above the action level, we shall make hearing protection available to the employee in accordance with OSHA regulations and require that the hearing protection be worn by the employee until the baseline audiogram is obtained.
- At least annually, after obtaining the baseline audiogram, we shall obtain a new audiogram for each employee exposed at or above the action level.

Evaluation of Audiogram

- Each employee's annual audiogram (when applicable) shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. A technician may do this comparison.
- If the audiogram shows that an employee has suffered a standard threshold shift, we may obtain a retest within 30 days and consider the results of the retest as the new annual audiogram.
- An audiologist, otolaryngologist or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. We shall provide to the person performing this evaluation the following information:
    - A copy of the requirements for hearing conservation.
    - The baseline audiogram and most recent audiogram of the employee to be evaluated.
    - Measurements of background sound pressure levels in the audiometric test room.
    - Records of audiometric calibrations required.
- If a comparison of the present audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed in writing of this fact within 21 days of the determination.
- Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, we shall ensure that the following steps are taken when a standard threshold shift occurs:
    - An employee not using hearing protection shall be fitted with hearing protection, trained in its use and care, and required to use it.
    - An employee already using hearing protection shall be refitted and retrained in the use of hearing protection and provided with hearing protection offering greater attenuation, if necessary.

    - Refer the employee for a clinical audiological evaluation or an ontological examination, as appropriate, if additional testing is necessary or if we suspect that a medical pathology of the ear is caused or aggravated by the wearing of hearing protection.
    - Inform the employee of the need for an ontological examination if a medical pathology of the ear which is unrelated to the use of hearing protection is suspected.
- If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour time weighted average of 90 dBA indicates that a standard threshold shift is not persistent, we:
    - Shall inform the employee of any new audiometric interpretation.
    - May discontinue the required use of hearing protection for that employee.
- As used in this program, a standard threshold shift is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000 and 4000 Hz in either ear.
- In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging (presbycusis) to the change in hearing level by correcting the annual audiogram according to the procedure as outlined in the OSHA regulations.

Audiometric Test Requirements

- Audiometric tests shall be pure tone, air conduction, hearing threshold examinations with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000 and 6000 Hz. Tests at each frequency shall be taken separately for each ear.
- Audiometric tests shall be conducted with audiometers that meet the specifications of and are maintained and used in accordance with most recent ANSI standards.
- Pulsed-tone and self-recording audiometers shall meet the requirements specified in the OSHA regulations for Control of Noise Exposure.
- Audiometric examinations shall be administered in a room meeting the requirements for Audiometric Test Rooms.

Audiometer Calibration

- The Functional operation of the audiometer shall be checked before each day's use by testing a person with known, stable hearing thresholds, and by listening to the audiometer's output to make sure that the output is free from distorted or unwanted sounds. Deviations of 10 dB or greater shall require an acoustic calibration.
- Audiometer calibration shall be checked acoustically at least annually in accordance with the OSHA regulations for Control of Noise Exposure. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check as deviation of 15 dB or greater necessitate an exhaustive calibration.
- An exhaustive calibration shall be performed at least every two years in accordance with ANSI standards. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this calibration.

Hearing Protection

All employees shall be provided with appropriate hearing protection at no cost. They will also be required to wear them in all areas determined high noise level areas (90 dBA or greater). These areas will have signage posted stating "Hearing Protection Required". All employees exposed to noise levels at or above 85 dBA but below 90 dBA will be provided the appropriate hearing protection and be encouraged to use them.

Hearing protection devices shall be available in multiple styles and brands which meet the appropriate attenuation level or Noise Reduction Rating (NRR) as required by the outcome of noise level monitoring. Individual employee selection can be based on many factors including personal comfort, personal preference, and level of protection.

An adequate supply of disposable hearing protection shall be available at all times. Sanitizing agents and supplies shall be available at no cost to the employees who use reusable hearing protection. These reusable hearing protectors shall also be replaced, whenever necessary, at no cost to employees.

All employees shall be fitted with and trained to use provided hearing protection. This shall occur prior to or at first use and annually thereafter.

Training

Employee Training

Training shall be provided to all employees exposed to noise levels at or above the action level of 85 dBA. This training shall take place upon initial assignment and annually thereafter. The training program shall cover the following topics:

- The effects that noise has on hearing.
- The purpose of hearing protection.
- The advantages, disadvantages, and reduction ratings, of different types of hearing protection.
- Information and instructions on the selection, fitting, use and proper care of hearing protection.
- The purpose of audiometric testing and a thorough explanation of the audiometric testing procedures.

All training records shall be maintained for at least 3 years as part of this program as well as in the employee's personnel records. These training records shall include the training content and the names of all employees who received the training.

Employee Information

- Employees shall be provided access to information as stated in the OSHA regulations for Occupational Exposure to Noise and Hearing Conservation.
- A copy of the standard shall be posted and be made available to all employees upon request. Employees may observe the noise measurement process.
- Each and every employee exposed at or above the action level of 85 dBA shall be notified of this result.
- Each and every employee who has experienced a standard threshold shift during audiometric testing will be notified in writing within 21 days of the determination.
- All employees who have a standard threshold shift during audiometric testing shall be referred to a medical professional for additional evaluation.

Record Keeping

Records associated with the hearing conservation program and the noise standard shall be maintained for the specific periods as outlined below:

- Noise exposure monitoring reports and records shall be maintained for at least 2 years.

Audiometric testing results shall be retained for the duration of employment for each employee. These audiometric testing results shall include the following information:

- Name and job class of the employee.
- Date of the audiogram.
- Name of the examiner.
- Date of the last calibration of the audiometer.
- The level of the employee's most recent noise exposure levels.

Employee training records shall be kept for at least 3 years.

Heat Illness Prevention Procedures:

Our Company has developed these Heat Illness Prevention Procedures to control and reduce the hazards of heat illness for our outdoor operations. They are intended to prevent heat (dehydration/heat stroke) illness by establishing procedures for employees who are exposed to temperature extremes such as radiant heat, humidity, or limited air movement while working outdoors.

Doneta Schlaepfer has been assigned as the Program Administrator who will oversee implementing and maintaining these procedures and all aspects of the emergency protocols. The Program Administrator, all supervisors and any designated person(s) shall be responsible for evaluating all our facilities and work environments to determine if our employees are at risk from heat related illnesses during temperature extremes and hot weather while working. If it is determined that employees are at risk, they will be trained to be aware of heat related illnesses, how to prevent heat related illnesses, the symptoms of heat related illnesses and procedures to follow if symptoms are present.

Documentation

These Heat Illness Prevention Procedures shall be maintained in written form and be available at all times at our worksites. The Program Administrator shall be responsible for reviewing these procedures at least annually to ensure that they are correctly implemented and are working properly for our company as we currently operate.

General Procedures

All new employees will be trained on these procedures before they are exposed to environmental heat.

For employees who are regularly working outdoors in hot weather, there will be periodic, mandatory meetings to remind them and re-emphasize the importance of frequent water consumption throughout their shift, seeking shade at the appropriate time, and watching for signs and symptoms of heat illness in themselves and other employees. Employees will be conditioned to working in hot environments through acclimatization guidelines listed later in these procedures. Supervisors will ensure that new employees are acclimatized prior to assigning them to working a full shift in hot temperatures.

The Program Administrator and all assigned supervisors are responsible for ensuring that all employees who are at risk for heat illness are trained at least annually on this program.

Specific Worksite Information:

Worksite Name:	Worksite Address:

The Designated Person(s) For This Worksite:

Name:	Title:	Phone Number:

The designated person(s) listed above for this site shall ensure the implementation of and shall have the authority to enforce the following procedures for this policy:

Procedures for the Provision of Water:

- Drinking water containers (5 to 10 gallons each) will be brought to the site so that at least two quarts per employee are available at the start of the shift. All employees, whether working individually or in smaller crews, will have access to drinking water.
- Paper cones or bags of disposable cups and necessary cup dispensers will be made available to employees and will be kept clean until used.
- As part of the Effective Replenishment Procedures, the water level of all containers will be checked periodically, e.g., every hour, every 30 minutes, and more frequently when the temperature rises. Water containers will be refilled with cool water when the water level within a container drops below 50 percent. Additional water containers, e.g., five-gallon bottles, will be delivered to replace water as needed.
- Water will be fresh, pure, suitably cool, and provided to employees free of charge. The designated person(s) will visually examine the water and pour some on their skin to ensure that the water is suitably cool. During hot weather, the water must be cooler than the ambient temperature but not so cool as to cause discomfort.
- Water containers will be located as close as practicable to the areas where employees are working, depending on the working conditions and layout of the worksite, to encourage the frequent drinking of water. If field terrain prevents the water from being placed within a reasonable distance from the employees, bottled water or personal water containers will be made available so that employees can have drinking water readily accessible.
- Since water containers are smaller than shade structures, they can be placed closer to employees than shade structures. Placing water only in designated shade areas or where toilet facilities are located is not sufficient. When employees are working across large areas, water will be placed in multiple locations. For example, on a multi-story construction site, water will be placed in a safely accessible location on every floor where employees are working.
- All water containers will be kept in sanitary condition. Water from non-approved or non-tested water sources, e.g., untested wells, is not acceptable. If hoses or connections are used, they must be approved for potable drinking water systems, as shown on the manufacturer's label.
- Daily, employees will be reminded of the location of the water supply and of the importance of drinking water frequently. When the temperature exceeds or is expected to exceed 80^0 Fahrenheit, brief "tailgate" meetings will be held with employees each morning to review the importance of drinking water, the number and schedule of water and rest breaks, and the signs and symptoms of heat illness.
- Audible devices, such as whistles or air horns, may be used to remind employees to take a water break.
- When the temperature equals or exceeds 95^0 Fahrenheit or during a heat wave, pre-shift meetings will be conducted before the commencement of work to both encourage employees to drink plenty of water and to remind employees of their right to take a cool-down rest when necessary. Additionally, the number of water breaks will be increased. The designated person(s) will lead by example and remind employees throughout the shift to drink water.
- Individual water containers or bottled water provided to employees will be adequately identified to eliminate the possibility of drinking from a co-worker's container or bottle.

Procedures for Access to Shade:

- Shade structures will be opened and placed as close as practicable to the employees when the temperature equals or exceeds 80^0 Fahrenheit. When the temperature is below 80^0 Fahrenheit, access to shade will be provided promptly when requested by an employee. **Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.**
- Enough shade structures will be available at the site to accommodate all of the employees who are on a break at any point in time. During meal periods there will be enough shade for all employees who choose to remain in the general area of work or in areas designated for recovery and rest periods. **Note: Employers may rotate employees in and out of meal periods, as with recovery and rest periods.**
- Areas shaded by artificial (as opposed to natural) means, such as by a pop-up canopy, must not allow employees to contact bare soil. This can be accomplished by providing chairs, benches, sheets, towels or any other item that allows employees to sit and rest without contacting dirt. **Note: Where the shaded area is a lawn (grass), this is not necessary.**
- On a daily basis employees will be informed of the location of the shade structure(s) and will be encouraged to take a five-minute cool-down rest in the shade. An employee who takes a preventative cool-down rest break will be monitored and asked if they are experiencing symptoms of heat illness. In no case will the employee be ordered back to work until signs or symptoms of heat illness have abated (**See Emergency Response listed later in this policy for additional information**.)
- As work crews move, the shade structure(s) will be relocated to be placed as close as practicable to the employees so that access to shade is provided at all times. All employees on a recovery or rest break or on a meal period will have full access to shade so they can sit in a normal posture without having to be in physical contact with each other.
- Before trees or other vegetation are used to provide shade, the thickness and shape of the shaded area will be evaluated to ensure that sufficient shadow is cast to protect employees.
- In situations where it is not safe or feasible to provide access to shade, e.g., during high winds, a note will be made of these unsafe or unfeasible conditions and alternative procedures will be used to provide access to shade upon request that will be at least as effective as shade in allowing employees to cool off, e.g., fans, misting machines. (**See Additional Procedures listed later in this policy to describe the alternative procedure for access to shade.**)

Procedures for Monitoring the Weather:

- The designated person(s) will be trained and instructed to check in advance the extended weather forecast. Weather forecasts can be checked with the aid of the internet (http://www.nws.noaa.gov/), by calling the National Weather Service phone numbers or by checking the Weather Channel TV Network. The work schedule will be planned in advance, taking into consideration whether high temperatures or a heat wave is expected. This type of advanced planning should take place whenever the temperature is expected to reach 70^0 Fahrenheit or higher.
- Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the National Weather Service Heat Index to evaluate the risk level for heat illness. Determination will be made of whether or not employees will be exposed to a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses. It is important to note that the temperature at which these warnings occur must be lowered as much as 15^0 if the employees are working in direct sunlight. Additional steps, such as Procedures for Heat Waves and High Heat, will be taken to address these hazards.
- Prior to each workday, the designated person(s) will monitor the weather either using http://www.nws.noaa.gov/ or a simple thermometer at the worksite. This weather information will be taken into consideration to determine when it will be necessary to make modifications to the work schedule, e.g., stopping work early, rescheduling the job, working at night or during the cooler hours of the day and/or increasing the number of water and rest breaks.
- The designated person(s) will monitor the worksite throughout the shift for a sudden increase in temperature and to ensure that once the temperature exceeds 80^0 Fahrenheit, shade structures will be opened and made available to employees. In addition, when the temperature equals or exceeds 95^0 Fahrenheit, additional preventive measures, such as Procedures for Heat Waves and High Heat, will be implemented.

Procedures for Heat Waves:

For purposes of this section only, "heat wave" means any day in which the predicted high temperature for the day will be at a minimum of 80^0 Fahrenheit and at least 10^0 Fahrenheit higher than the average high daily temperature in the preceding five days.

- During a heat wave or heat spike, the work day will be cut short or rescheduled, e.g., conducted at night or during cooler hours.
- During a heat wave or heat spike and before starting work, "tailgate" meetings will be held to review the company Heat Illness Prevention Procedures (HIPP), the weather forecast and emergency response procedures. Additionally, if schedule modifications are not possible, employees will be provided with an increased number of water and rest breaks and observed closely for signs and symptoms of heat illness.
- When possible, each employee will be assigned a "buddy" to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.
- Employees will be encouraged to report any signs or symptoms of heat illness to the designated person(s) and/or their supervisor.

Procedures for High Heat:

High Heat Procedures are additional preventive measures that this company will use when the temperature equals or exceeds 95^0 Fahrenheit.

- Effective communication by voice, direct observation (applicable to work crews of 20 or fewer), mandatory buddy system or by electronic means will be maintained so that employees at the jobsite can contact a supervisor when necessary. If the designated person(s) is unable to be near the employees (to observe them or communicate with them), then an electronic device, such as a cell phone or text messaging device may be used for this purpose if reception in the area is reliable.
- Frequent communication will be maintained with employees working by themselves or in smaller groups (via phone or two-way radio), to be on the lookout for possible symptoms of heat illness. The employee(s) will be contacted regularly and as frequently as possible throughout the day since an employee in distress may not be able to summon help on their own.
- Effective communication and direct observation for alertness and signs and symptoms of heat illness will be conducted frequently. When the designated person(s) is not available, an alternate responsible person shall be designated to look for signs or symptoms of heat illness. If a designated person(s) or any employee reports any signs or symptoms of heat illness in any employee, the designated person(s) will take immediate action commensurate with the severity of the signs/symptoms of heat illness shown. (**See Emergency Response listed later in this policy for additional information**.)
- Employees will be reminded frequently throughout the shift to drink plenty of water and take preventative cool-down rest breaks as needed.

Procedures for Acclimatization:

Acclimatization is the temporary adaptation of the body to work in the heat which occurs gradually when a person is exposed to it. In more common terms, the body needs time to adapt when temperatures rise suddenly. An employee risks heat illness by not taking it easy when a heat wave or heat spike strikes or when starting a new job that exposes the employee to a level of heat to which the employee's body has not yet had time to adjust.

Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. Employers are responsible for the working conditions of their employees and they must implement additional protective measures when conditions result in sudden exposure to heat their employees are not yet accustomed.

- The weather will be monitored daily. The designated person(s) will be on the lookout for heat waves, heat spikes, or temperatures to which employees haven't been exposed to for several weeks or longer.

- During a heat wave or heat spike, the work day will either be cut short, e.g., work will end at noon, or be rescheduled, e.g., conducted during cooler hours of the day, or if at all possible work will be moved to another day.
- New employees and those who have been newly assigned to a high heat area will be closely observed by their supervisor and/or the designated person(s) for the first 14 days. The intensity of the work will be lessened during a two-week break-in period by using procedures such as scheduling slower-paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early morning or evening). Steps taken to lessen the intensity of the workload for new employees with be documented.
- The designated person(s) will be extra vigilant with new employees and stay alert to the presence of heat-related symptoms.
- New employees will be assigned a "buddy" or experienced co-worker, so they can watch each other closely for discomfort or symptoms of heat illness.
- During a heat wave, all employees will be observed closely or maintain frequent communication via phone or radio to the designated person(s) and/or supervisors for possible symptoms of heat illness.
- Employees and supervisors, including designated person(s), will be trained on the importance of acclimatization, how it is developed and how these company procedures address it.

Procedures for Emergency Response:

- When a crew is assigned to a particular worksite, the employees and designated person(s) will be given clear and precise directions to the worksite, e.g., street or road names, distinguishing features and distances to major roads, etc., to avoid delay of emergency medical services to the jobsite.
- Prior to the start of the shift, a determination will be made as to whether a language barrier is present at the site, and, if necessary, steps will be taken such as assigning the responsibility to call emergency medical services to an English speaking employee, to ensure that emergency medical services can be immediately called in the event of an emergency.
- All designated person(s) will carry cell phones or other means of communication to ensure that emergency medical services can be called. Checks will be made to ensure that these electronic devices are functional prior to each shift.
- When an employee shows symptom(s) of possible heat illness, emergency medical services will be called and steps will immediately be taken to keep the stricken employee cool and comfortable to prevent the progression to more serious illness. **Under no circumstances will the affected employee by left unattended**.
- At remote locations, such as rural farms, lots, or undeveloped areas, the designated person(s) will assign an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the assigned person(s) shall be given reflective vests or flashlights to direct emergency personnel to the sick employee's location, which may not be visible from the road or highway.
- During a heat wave, heat spike, or hot temperatures, employees will be reminded and encouraged to immediately report to their supervisor any signs or symptoms of heat illness they are experiencing.
- Supervisors and designated person(s) shall be trained on every detail of these written procedures for emergency response.

Procedures for Handling a Sick Employee:

- When an employee displays possible signs or symptoms of heat illness, a trained first aid employee and/or designated person(s) will evaluate the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. A sick employee will not be left alone in the shade as they could become seriously ill.
- When an employee displays possible signs or symptoms of heat illness and no first aid trained employee(s) is available at the site, emergency service providers will be called.
- Emergency service providers will be called immediately if an employee displays signs or symptoms of severe heat illness (e.g., decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, red and hot face) does not look okay or does not get better after drinking cool water and resting in the shade. While the ambulance is en route, first aid will be initiated (i.e., cool the employee by placing the employee in the shade, removing excess layers of clothing, placing ice packs in the armpits and groin area and fan the victim). **Do not let a sick employee leave the site, as they can get lost or die before reaching a hospital!**

- If an employee displays signs or symptoms of severe heat illness (e.g., decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, red and hot face) and the worksite is located more than 20 minutes away from a hospital, emergency service providers will be called, the signs and symptoms of the victim will be communicated to them and an Air Ambulance will be requested.

Procedures for Employee and Supervisor Training:

To be effective, employees must understand training. Therefore, the training must be given in a language and vocabulary each employee understands. Training records will be maintained and will include the following:

  - Date of the training.
  - Name of the person presenting the training.
  - Name of the employee(s) attending the training.
  - The safety topic(s) covered.

- Supervisor's and any designated person(s) will be trained prior to being assigned to supervise other employees and given authority to enforce these procedures. Training will include this company's written procedures and the steps supervisors and any designated person(s) will follow when employees exhibit symptoms consistent with heat illness.
- Supervisors and any designated person(s) will be trained on their responsibility to provide water, shade, cool-down rests and access to first aid, as well any employee's right to exercise their rights under this policy without retaliation.
- Supervisors and any designated person(s) will be trained in appropriate first aid and/or emergency response to different types of heat illness and made aware that heat illness may progress quickly from mild signs and symptoms to a serious, life-threatening illness.
- Supervisors and any designated person(s) will be trained on how to track the weather at worksites (by monitoring predicted temperature highs and periodically using a thermometer). Supervisors and designated person(s) will be instructed on how weather information will be used to modify work schedules, increase the number of water and rest breaks or stop work early if necessary.
- All employees, supervisors and any designated person(s) will be trained prior to working outside. Training will include all aspects of implementing an effective Heat Illness Prevention Plan, including providing and consuming sufficient amounts of water (up to 1 quart per hour), providing access to shade, high-heat procedures, emergency response procedures, and acclimatization procedures contained in this written plan. Employees, supervisors and any designated person(s) will also be trained on the environmental and personal risk factors of heat illness and the importance of immediately reporting signs and symptoms of heat illness in themselves or others.
- In addition to initial training, **ALL** employees will be retrained annually.
- Employees, supervisors and any designated person(s) will be trained on the steps for contacting emergency medical services, including how they are to proceed when there are non-English speaking employees, how clear and precise directions to the site will be provided and the importance of making visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.
- When the temperature is expected to exceed 80^0 Fahrenheit, short "tailgate" meetings will be held to review the weather report, reinforce heat illness prevention with **ALL** employees, provide reminders to drink water frequently, inform employees that shade will be available, review the burden of heat load on the body caused by exertion, clothing and personal protective equipment (PPE) and remind employees to be on the lookout for signs and symptoms of heat illness.
- New employees will be assigned a "buddy" or experienced co-worker to ensure they understand the training and follow company policies and procedures.

Procedures for Preventing Heat Illness:

AWARENESS OF HEAT ILLNESS SYMPTOMS CAN SAVE YOUR LIFE AND/OR THE LIFE OF A CO-WORKER!

- If you are coming back to work from an illness or an extended break or you are just starting a job working in the heat, it is important to be aware that you are more vulnerable to heat illness until your body has had time to adjust. Remind your supervisor of this since you are not acclimatized to the heat.
- Drinking water frequently is vital to workers exposed to the heat. An individual may produce as much as 2-3 gallons of sweat per day. In order to replenish that fluid, each employee should drink 3-4 cups of water per hour

during their work shift. Each employee should also begin drinking water before their shift to ensure adequate hydration.

- Take frequent breaks in a cool, shaded area and allow time for recovery from the heat during the day, especially if you notice you are getting a headache or you start feeling overheated. Ensure that you are aware of the location of the water supply and shade at the worksite before work begins.
- Avoid or limit the use of alcohol and caffeine during periods of extreme heat. Both dehydrate the body. Electrolyte drinks are good for replacing both water and minerals lost through sweating, but water is still the best way to maintain the hydration level in the body. Employees may drink electrolyte drinks if they bring their own to the worksite.
- When working in the heat, be sure you know how to call for medical attention. If you start to feel symptoms such as nausea, dizziness, weakness or unusual fatigue, let your supervisor know and rest in a cool shaded area. If symptoms persist or worsen, seek immediate medical attention.
- Whenever possible, wear clothing that provides protection from the sun, but allows airflow to the body. Protect your head and shade your eyes when working outdoors. You should immediately report all unsafe conditions and/or concerns to your supervisor and/or designated person(s) or the Program Administrator.

Heat Illness Symptoms & Treatment Procedures:

The following information will help employees recognize the main types of heat related illnesses, symptoms, and the appropriate treatment to reduce the effects of heat related illness.

Heat Cramps

Symptoms - Muscle spasms in legs, arms, or abdomen.
Treatment - Move person to a cooler location, stretch and massage muscles to relieve spasms, and give cool water or electrolyte containing fluid to drink.

Heat Exhaustion

Symptoms - Headache, clumsiness, dizziness/lightheadedness/fainting, weakness/exhaustion, heavy sweating with clammy moist skin, irritability, confusion, nausea/vomiting, and paleness.
Treatment - Move person to cooler place (**DO NOT LEAVE ALONE**), loosen or remove heavier clothing that restricts cooling. If conscious, provide small amounts of cool water to drink, fan person/spray with cool water/apply wet cloth to skin to increase evaporating cooling and CALL 911 if the person is not feeling better in a few minutes.

Heat Stroke

Symptoms - Sweating may or may not be present, red or flushed, hot dry skin, bizarre behavior, mental confusion, loss of consciousness, panting/rapid breathing, rapid and weak pulse or seizures.
Treatment - CALL 911, move person to cooler place (**DO NOT LEAVE ALONE**), cool person rapidly, remove clothing, pour water on person, fan the person, apply cold packs behind the neck, in the armpits, in the groin and watch for breathing problems.

Additional Procedures:

The following procedures listed below are in addition to, and will be enforced the same as, the procedures outlined above in this Heat Illness Prevention Procedures (HIPP).

1.
2.
3.
4.
5.

Jobsite Security Program

Providing and maintaining appropriate levels of jobsite security will protect employees at jobsites and reduce the potential for theft and vandalism. Gering Valley Plumbing & Heating, Inc. is committed to the prevention and/or reduction of security breaches/incidents at our jobsites.

The purpose of this plan is to provide guidance and requirements necessary for jobsite security operations. Security risks can vary according to the construction type and site location and will be addressed at each jobsite during pre-job meetings, toolbox talks and/or in the jobsite hazard assessments (JSAs). (**See attached Jobsite Security Risk Assessment form**.) Affected employees will be provided the opportunity to participate in the risk assessment process.

This procedure applies to all employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence. However, this document covers Gering Valley Plumbing & Heating, Inc. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

Program Administrator

The Program Administrator shall have the knowledge and appropriate training to oversee all aspects of our Jobsite Security Program, including implementation, evaluation, and maintenance of the program. Doneta Schlaepfer has been designated as the Program Administrator and is responsible for the successful implementation and on-going execution of this program. The Program Administrator shall review these written procedures at least annually, or more frequently, if it is determined the procedures are not effective.

Site Managers and Supervisors

- Shall ensure all affected employees are aware of the jobsite security protocols in place and ensure the requirements of this program are followed and implemented.

Employees

- Shall understand this program, follow its guidelines and report any unsafe work conditions.

Security Assessment

The Program Administrator and/or site supervisor shall conduct a risk assessment to evaluate the risk of jobsite security incidents across jobsites. An initial site security assessment will consider the following major factors:

- Project location – exposures arising from neighboring properties and specific to urban or rural locations.
- Project type – nature of the project, i.e., vertical or horizontal project, and value of equipment and materials utilized.
- Location specific exposure – does the site location influence exposure to arson or intrusion. Including socioeconomic profile of locality taking into consideration area crime rate and nature of the crimes.
    - Low risk location – better economic and social condition.
    - Medium risk location – deteriorating social, economic conditions and/or increase of crime rate.
    - High risk location – recent unrest in the area and/or high crime rate.
- Project public support – is the project a benefit or an inconvenience to the area? Does the project have public support or is it perceived as a detriment and a likely target for vandalism or theft?

Jobsite Security Assessments shall be reviewed periodically and revised, as needed, to reflect any changes to project boundaries, progress of work, logistics plan, etc. and their effects on previously evaluated security risks.

Security Measures

Gering Valley Plumbing & Heating, Inc. shall implement control measures to reduce or eliminate security risks/incidents at our jobsites. These measures may include, but are not limited to, the following:

- posted signage
- restricted access to work areas
- locked doors
- keycards
- security cameras
- alarms
- fencing
- lighting
- personal protective devices
- security guards
- background checks
- time-lock safes
- other additional robbery prevention measures

All security breaches/incidents shall be reported immediately to supervisors and/or management. If a breach/incident occurs at a client site, the client host shall be notified immediately. If a security breach/incident occurs, than an incident investigation will be completed and the results of the investigation reviewed. The goal of the investigation is to identify root causes and take corrective action to reduce the potential for future incidents.

Training

All employees shall be trained on jobsite security policies and procedures including, but not limited to, the following:

- Jobsite arrangements to prevent security incidents.
- Appropriate response to an incidence, including how to obtain assistance if necessary.
- Procedures for reporting, investigating and documenting security incidents.

Retraining shall be provided any time these policies or procedures are changed, updated, or there is a change in work assignment. All training shall be documented and retained by the Program Administrator for a minimum of three years.

JOBSITE SECURITY RISK ASSESSMENT

Item	Yes	No	N/A	Control Measures/Comments
Are background checks conducted on all employees in sensitive jobs and following transfer requests to more sensitive jobs?				
Is appropriate perimeter protection in place?				
Are physical barriers in place that limit vehicle access where required?				
Are the perimeter doors, gates, windows and docks secured and in good working condition?				
Are the perimeter doors, gates and docks adequately staffed during workings hours and secured after hours?				
Are security surveillance cameras and perimeter (docks, doors, gates and windows) alarms in place?				
Are surveillance video records properly archived?				
Are security cameras and alarms inspected and tested on a regular basis?				
Is there regular patrolling of the perimeter to inspect the fence line damage, clear zone, obstructions, unoccupied/unidentified vehicles and other breaches?				
Is the perimeter lighting adequate?				
Is there a parking lot security plan in place?				
Are proper warning signs posted (e.g., no trespassing, driver direction, restricted areas, etc.)?				
Are all visitors and contractors screened and required to sign-in/sign-out and produce valid photo identification?				
Are sensitive areas identified and properly secured for authorized access?				
Are locks changed immediately when the key controls are compromised?				
Add Others as Needed for Specific Jobsite:				

Lock-Out/Block-Out Program:

De-energizing Equipment and Systems and the Control of Hazardous Energy

Our Company has developed these Lock-Out / Block-Out Program (LBP) to inform our employees of and to reduce the hazards associated with, cleaning, repairing, servicing, setting-up, and/or adjusting equipment and machinery. Any of our employees that may be responsible for these duties including operating equipment or machinery shall have a clear understanding of our policies and procedures for working with this equipment and machinery.

Doneta Schlaepfer has been assigned as the Program Administrator for our LBP. The Program Administrator will oversee all aspects of this program and be responsible for updating it if new equipment or machinery is obtained or if new processes are required when working with the equipment or machinery.

Equipment Survey

The Program Administrator shall ensure that an initial survey is conducted of our entire facility and operation to identify all energy sources, i.e., electrical, mechanical, hydraulic, pneumatic, etc., and which equipment is controlled by each source. The Program Administrator and authorized supervisors shall locate and mark the disconnecting means for all the identified equipment. These marks shall indicate the function of the disconnecting means. Once the marking is complete, the identification details shall be categorized indicating the equipment supplied, the energy type and magnitude.

Methods of Locking Out Controls

There are many different ways of locking out pieces of equipment. The most common way of locking out equipment is the disconnect switch. Disconnect switches typically have an opening where a lock can be placed. This opening matches and coincides with a permanent lock ring or clasp on the box.

If more than one employee works on any given piece of equipment at the same time, a lock-out adapter that will allow for several locks must be used. This allows all workers to lock out the equipment with their individual locks. It prevents the equipment from being re-energized until work is completed and all locks are removed.

If any control switches, fuses, or other controls, are located inside metal-covered boxes, the switches or controls must be turned to the off position and the fuse removed. The boxes themselves must then be locked. If there is no way of locking out the boxes, a common hasp can be welded or riveted to the door and a lock staple attached to the box. This will then allow the box to be appropriately locked.

Unplugging a piece of equipment or machinery is not locking it out. A plug lock-out device should be used to cover and lock the plug so that it cannot be plugged in by mistake.

Lock-Out Procedure Requirements

- All maintenance personnel will be issued an appropriate lock and/or locks. The lock will have the individual worker's name on it and other types of identification as well. Only the worker issued the lock will have a key to that lock.
- The worker performing the lock-out procedure shall know prior to turning off equipment, the type and magnitude of the energy, the hazards of the energy to be controlled, and the appropriate means to control the energy.
- The worker performing the service will check to ensure that no one is operating the equipment before the power is turned off. The machine operator will be informed before the power is shut off since a sudden loss of power can result in a serious accident.
- All steam, air, and hydraulic lines shall be bled, drained, and cleaned out. There shall not be any pressure in these lines or in any reservoir tanks.
- Any mechanism under any load or pressure, such as springs, shall be released and properly blocked.

- Each person who will be working on the equipment shall put their own lock on the equipment lock-out device. Each lock will remain in place on the equipment's lock-out device until all work is completed. And only the worker who placed the lock shall remove the lock.
- All energy sources which could activate the equipment must be locked out before any work begins.
- The main valve or main electrical disconnect must be tested to be sure that all power to the equipment is off.
- Electrical circuits must be checked by a qualified person with the proper electrical testing equipment that is properly calibrated. An electrical failure could energize the equipment even if the switch is in the off position. Stored energy in all electrical capacitors shall be safely discharged.
- Return all disconnects and operating controls to the off position after each test.
- Accident prevention tags shall be attached to the lock and/or lock-out device. The tag shall state the reason for the placing of the tag, the name of the person placing the tag, how to contact this person, and the date and time the tag was placed.
- When outside service personnel perform maintenance or repair service on our equipment, the Program Administrator shall ensure that our lock-out / block-out procedures are followed.
- If an energy isolating device is not capable of being locked out, the employer's energy control program shall utilize a tagout system. If an energy isolating device is capable of being locked out, the employer's energy control program shall utilize a lockout system, unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection. After January 2, 1990, whenever replacement or major repair, renovation or modification of a machine or equipment is performed, and whenever new machines or equipment are installed, energy isolating devices for such machine or equipment shall be designed to accept a lockout device.
- When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.

Locks, Blocks and Accident Prevention Tags

Locks

Each worker performing any service on equipment shall be issued a lock and have the only key for that lock. The lock shall be substantial and durable. The worker name shall be placed on this lock so that it is easily identifiable and readable. We may also color-code our locks to identify the different shifts and/or service being performed.

If more than one employee works on any given piece of equipment at the same time, a lock-out adapter that will allow for several locks must be used. This allows all workers to lock out the equipment with their individual locks. It prevents the equipment from being re-energized until all work is completed and all locks are removed.

Tags

Never use a tag by itself. Tags shall always be used in conjunction with a lock. Tags must state the following:

- Reason for the lock-out.
- The name of the employee who is working on the equipment and how to reach the person if needed.
- Date and time the tag and lock were put in place.

Tag-out devices that are used to secure the accident prevention tag to the lock shall be capable of enduring 50 pounds of pull and shall be non-reusable.

Blocks

Suitable blocks are another important safety device that can be used for making equipment safe to be cleaned, repaired, serviced, setting-up and/or adjusted. Blocks will be placed under all raised dies, lifts, or any equipment that might inadvertently or unintentionally move by sliding, falling, or rolling.

Blocks, special brackets, or special stands, such as those commonly used to stabilize raised vehicles shall be available and used at all times. Another form of blocking is the placement of blinds. Blinds shall be placed in a pipe to ensure that no amount of air, steam, or other substance will pass through the point where the blind is installed in case the system is accidentally activated.

Before any blinds or blocks are installed, all air, steam or hydraulic lines, shall be bled down to get rid of any residual pressure. All oiled springs, spring-loaded devices, or suspended loads, must also be released so that their stored energy will not be released during the service, or result in any inadvertent movement.

Written Standard Lock-Out Procedure

Working on equipment and machinery using lock-out / block-out procedures usually require coordination and cooperation between our production and maintenance departments. In order for this type of work to be successful and ensure the safety of everyone involved, we have developed standard procedures that govern the lock-out of all our equipment. These written lock-out procedures shall include the following:

- Job objectives and equipment involved.
- Detailing the energy sources for the machine and the lock-out procedures for these energy sources.
- Steps for shutting down and securing the machine.
- Procedures for applying the lock-out or tag-out.
- Steps to verify the effectiveness of the lock-out.
- Procedures for restarting the machine.

Sequence of Lock-Out Procedure

- Notify all affected employees that a lock-out is required and the reason for the lock-out.
- If the equipment is operating, shut it down by the normal stopping procedure (depress stop button, toggle switch, etc.).
- Operate the switch, valve, or other energy isolating devices, so that the energy source(s) (electrical, mechanical, hydraulic, other) is disconnected or isolated from the equipment.
- Stored energy, such as that in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure, must also be dissipated or restrained by methods such as grounding, repositioning, blocking, or bleeding down.
- Lock-out energy isolating devices with an assigned individual lock.
- After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.
  CAUTION: Return operating controls to neutral position after the test.
- The equipment is now locked out.

Restoring Equipment to Service

- When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed to any power up hazards.
- When equipment is clear, remove all locks. The energy isolating devices may be operated to restore energy to equipment.

Procedure Involving More than One Person

In the preceding steps, if more than one individual is required to lock-out equipment, each shall place his/her own personal lock on the energy isolating device(s). One designated individual of a work crew or a supervisor, with the knowledge of the crew, may lock out equipment for the whole crew. In such cases, it may be the responsibility of the individual to carry out all steps of the lock-out procedure and inform the crew when it is safe to work on the equipment. The designated individual shall not remove a crew lock until it has been verified that all individuals are clear. Additionally, during a shift or personnel change there shall be a lock on the equipment at all times. The designated individual **must** wait to remove their lock until the replacement designated individual has their own lock in place. This ensures the continuity of the lock-out and prevents unexpected start-up of the equipment involved. If a lock is mistakenly left in place, then a supervisor will make every effort to contact the employee that left the lock on. If an employee is unable to be reached, they still must be notified of the lock removal before returning to work. The supervisor is responsible to determine if the lock can be cut off and the machine is okay to resume operations.

Testing Equipment During Lock-Out

In some instances, the machinery and equipment may need to be tested in the middle of maintenance or repair operations. In these instances, the machinery and equipment will need to be energized before the additional work can be completed. We have strict procedures for this type of work:

- Clear all personnel to safety.
- Clear all tools and materials from the machine.
- Remove lock-out devices according to regular established procedures.
- Re-energize system following established safe procedures.
- Proceed with tryout and/or test.
- Neutralize all energy sources, purge all systems, and lock-out machine according to established procedures.
- Verify lock-out effectiveness.
- Resume maintenance or repair operations.

There may be times that the design of the machine or performance limitations may dictate that effective, alternative worker protection be developed and implemented when pre-established lock-out procedures are not feasible.

If the machinery or equipment must be capable of moving in order to perform maintenance, cleaning or repair tasks, all our workers will use extension tools to protect themselves from injury.

Periodic Inspection/Review

The Program Administrator shall ensure that an inspection/review of the energy control procedures be conducted at least annually to evaluate the effectiveness of the procedure and to determine if the procedures need to be updated. The review shall be conducted by someone other than the authorized person performing the lock-out procedures on any given piece of equipment or machinery.

The review shall include an in-depth look at the responsibilities that each authorized person has while performing hazardous energy control procedures. This review shall be between the authorized employee and the person conducting this annual evaluation.

The Program Administrator shall certify that the inspection was performed. The certification shall identify the equipment or machine on which the procedure was reviewed, the date of the review, all employees included in this review, and the person performing the review.

Training

All authorized employees shall be trained on our hazardous energy control procedures and on all hazards related to performing the duties of cleaning, repairing, servicing, setting-up, and adjusting our equipment and machinery.

Each affected employee shall be instructed in the purpose of our Lock-Out/Block-Out Program and of our energy control procedures.

Retraining is required when there is a change in job assignments, in machines, a change in the energy control procedures or new hazards are introduced.

All other employees, who may work in an area where these energy control procedures may be used, shall be trained and instructed on not attempting a restart of any equipment that is locked and tagged out.

Record Keeping

All training and/or retraining shall be documented and include date of training/retraining, name of employee(s), and name of instructor. The Program Administrator will maintain all training/inspection/review documentation. This document shall also be maintained in writing by the Program Administrator and shall be made available to all employees.

Respiratory Protection Program

Respiratory Protection - Exposure to Dusts, Fumes, Gases & Low Oxygen Environments

This program has been designed by Gering Valley Plumbing & Heating, Inc. to establish standard operating procedures to minimize exposure and protect employees from possible respiratory hazards they might encounter in the workplace. This program applies to all employees who are required to wear respirators during normal operations, non-routine tasks, or emergency operations such as a spill of a hazardous substance.

Responsibilities

Program Administrator

The Program Administrator shall have the knowledge and appropriate training to oversee all aspects of our Respiratory Program, including implementation, evaluation, and maintenance of the program. Doneta Schlaepfer has been designated as the Program Administrator and is responsible for the successful implementation and on-going execution of this program. The Program Administrator duties are as follows:

- Implementation, evaluation, and on-going execution of this program.
- Identifying work areas, processes, or tasks that require employees to wear respirators and evaluating hazards.
- Selection of respiratory protection options.
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
- Arranging for and/or conducting training.
- Ensuring proper storage - all respirators shall be stored in a manner to protect them from damage, contamination, and exposure to extremes in temperatures, moisture, and damaging chemicals, and the sanitation and maintenance of respiratory protection equipment. Also ensuring respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
- Implement proper maintenance and care procedures and schedules.
- Arrange for medical evaluation prior to fit test.
- Conduct or arrange for fit testing.
- Maintain records required by the program.
- Evaluate the program annually or as needed.
- Update written program as needed.

Supervisors

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

- Ensuring that employees under their supervision, including new hires, have received appropriate training, medical evaluation, and fit testing.
- Ensuring the availability of appropriate respirators and accessories.
- Being aware of and communicating to employees of tasks requiring the use of respiratory protection.
- Enforcing the proper use of respiratory protection when necessary.
- Employees are aware of any equipment or clothing that may interfere with respirator use.
- Notifying employees of potential issues that may develop during respirator use, such as discomfort, skin irritation, or breathing difficulty.

- Ensuring that respirators are properly cleaned, maintained, and stored as directed by the Program Administrator.
- Ensuring that respirators fit well and do not cause discomfort.
- Monitoring work areas and operations to identify respiratory hazards and to alert supervisors and employees of exposure to higher concentrations of a contaminant or a new contaminant.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

Employees

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:

- Care for and maintain their respirators as instructed and store them in a clean, sanitary location as directed by the Program Administrator.
- Understanding and following safe work procedures.
- Using their respirators as instructed.
- Understanding the limitations of their respirators and following the manufacturers' instructions.
- Inspecting their respirators before use.
- Inform their supervisor or the Program Administrator if the respirator no longer fits well and request a new respirator that fits properly.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel may not be adequately addressed in the workplace and/or of any other concerns that they have regarding the program.

Training

The Program Administrator shall oversee all training related to the Respiratory Protection Program. Supervisors will be responsible for providing training to employees on the Respiratory Protection Program and ensure that these procedures are implemented to enforce workplace safety. The training shall at a minimum consist of the following areas:

- All workers shall be trained on appropriate respirator equipment before use and retrained as necessary as an infrequent work occurrence.
- Training must include employee knowledge of respirators and appropriate selection based on hazards present, the fit, use and limitations of respirators, emergency situations, fit-test, wearing, maintenance, and storage. Training shall also include medical signs and symptoms of effective use, how to perform seal checks and general requirements of the OHSA Respiratory Standard.
- Training will include provisions for a medical evaluation prior to fit-testing to address employee concerns.
- A medical evaluation prior to fit-testing shall be completed. This evaluation will be confidential, conducted during normal work hours, convenient, understandable, and the employee will be given the chance to discuss the results with a physician or licensed health care professional.
- Training will include any/all qualitative and quantitative methods used to evaluate the proper fit-test of tight-fitting face pieces. The fit-test shall be conducted before initial use, change in respirator used, and annually thereafter. **Note**: Facial hair and some glasses may prevent proper seal of tight-fitting face pieces or interfere with the valve function and shall not be worn by affected employees.
- Training will also include any applicable mid-use maintenance requirements and safety precautions when dealing with the rare occurrence of conditions deemed 'immediately dangerous to life or health' atmosphere hazards.

Atmospheres Deemed Immediately Dangerous to Life & Health (IDLH)

When an employee must work in an atmosphere deemed IDLH the Program Administrator shall implement the following:

- On-site rescue services shall be arranged. The Program Administrator shall ensure that at least one standby person at the site is trained and immediately available to perform rescue and emergency services.
- Communication between the affected employee and the standby person is maintained at all times.

- The Program Administrator shall ensure that each standby person is trained on the necessary actions/notification procedures to follow during a rescue, and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues. Training shall include the use of Self-Contained Breathing Apparatus (SBCA) or Supplied Air Respirator (SAR) with auxiliary air supply as part of the mandatory rescue equipment.
- Each standby person shall be trained in basic first-aid and in CPR.
- When we arrange to have persons other than our employees perform a rescue, the Program Administrator shall inform the rescue service of the hazards they may confront when called on to perform a rescue at the host employer's facility

General Requirements

- When practicable, use shall be made of water, oil, or chemicals, in such non-injurious quantities, and with such frequency, as may be necessary to suppress and allay harmful dusts, fumes, mists, vapors, and gases wherever Engineering Controls, Administrative Controls, and/or Control by Respiratory Protective Equipment are impracticable or inadequate to prevent harmful exposure.
- The use of allaying media may also be supplementary to, or may be substituted for, other provisions of these orders when such allaying media alone would prevent harmful exposure.
- When allaying media is not practical and/or there is a high risk of exposure to a toxic environment, or when working in oxygen deficient atmospheres, the appropriate respiratory protection and other PPE shall be supplied to minimize safety risks.
- All supplied respiratory protection shall be NIOSH certified and applicable, including cartridges and filters, to the hazards to which the worker is exposed.
- Respirators and supplies to clean/disinfect respirators shall be provided at no cost to the employee. The following steps can be used to clean and sanitize most respirators:
    - Remove any filters, cartridges or canisters.
    - Check the respirator for any damage, i.e., cracks in the rubber seal, broken strap, etc.
    - Wash the respirator and associated parts in warm water mixed with a mild detergent.
    - Rinse the respirator thoroughly in clean, warm water.
    - Wipe the respirator with disinfectant wipes, 70% isopropyl alcohol, or a sanitizing foam to kill germs. Wait a few minutes to allow the disinfectant to work, then rinse the respirator thoroughly in clean, warm water.
        - NOTE: Sanitizing products can break down/weaken the rubber seal of respirators, so if you choose to use this step, be sure to rinse the rubber parts of respirators thoroughly.
    - Air dry in a clean area.
    - Reassemble the respirator, e.g., replace the cartridges.
    - Place in a clean, dry plastic bag, storage cabinet or locker.
- All respirators used in routine situations shall be inspected before each use and during cleaning. Respirators used only in emergency situations shall be inspected monthly and in accordance with the manufacturer’s recommendations and shall be checked for proper function before and after each use. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
- Respirator inspections shall include the following:
    - A check of respirator function.
    - Tightness of connections.
    - Condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube and cartridges, and canisters or filters.
    - Check of elastomeric parts for pliability and signs of deterioration.
- Employees shall conduct user seal checks each time they wear their respirator using positive or negative pressure checks.
- If break-through, leakage, or changes in breathing resistance is detected, or experiences any of the following during use of the respirator equipment, the worker shall immediately exit the area to determine the problem.
    - Nausea
    - Dizziness
    - Eye irritation

- Unusual odor or taste
- Excessive fatigue
- Difficulty breathing

User Seal Checks

BEFORE any work is started, you must conduct a seal check to ensure that your respirator is functioning properly. There are two simple checks to test the seal, either negative-pressure or positive-pressure seal checks. Before doing any seal check, make sure your respirator has all its inlet and exhaust valves. Make sure that the valves are in good condition and lie flat. Doing these checks will help you tell whether you have a good seal and whether the valves are in place and working.

If the respirator is to be used with any other personal protective equipment, such as, goggles, hearing protection or a hard hat, all seal checks must be done while wearing this equipment.

Negative-Pressure User Seal Check – this test is called a negative-pressure user seal check because you create a slightly negative air pressure inside the respirator facepiece by inhaling. Follow the instructions below:

- Put on the respirator and other associated personal protective equipment, if applicable. Tighten the head straps until the respirator feels snug but comfortable. Wear the respirator for a few minutes so that it will warm up and conform to your face better.
- Close off the inlet opening of the cartridges or filters by covering them gently with the palms of your hands, a plastic bag, a special adapter or gloves, in some cases you may have to remove the cartridges so you can cover the inlet valves. If you are carrying out this test while wearing a PAPR or an air-supplied respirator, close off or disconnect the hose to stop the air flow.
- Breathe in slightly to create a vacuum.
- Hold for 10 seconds.
- If you have a good seal, the facepiece should collapse slightly against your face and stay collapsed. No air should leak into the facepiece past the sides, top or bottom.

If the facepiece doesn't collapse and stay collapsed, there is an air leak. Check the exhalation valve(s) and try repositioning the respirator on your face and adjusting the head straps. Carry out the negative-pressure seal check again. If you cannot get a seal after a few attempts, try another size, make or model of respirator. Repeat the check until you find a respirator that passes the seal check.

Positive-Pressure User Seal Check – this test is similar to the negative-pressure user seal check except that you breathe out slightly while gently covering the exhaust valve with your palm. This creates positive pressure in the facepiece. If you have a good seal, the facepiece will bulge or puff out slightly from your face. Again, no air should leak past the sides, top or bottom of the respirator. Follow the instruction below:

- Put on the respirator and other associated personal protective equipment, if applicable. Tighten the head straps until the respirator feels snug but comfortable. Wear the respirator for a few minutes so that it will warm up and conform to your face better.
- Close off the exhaust valve opening by covering it with the palm of your hand.
- Breathe out slightly to force air into the facepiece.
- Hold for 10 seconds.

- If you have a good seal, the facepiece should bulge out and stay out. No air should leak out of the facepiece past the sides, top or bottom.

If the air does leak out, check the inhalation valves and try repositioning the respirator on your face and adjusting the head straps. If you cannot get a seal after a few attempts, try on another size, make or model of respirator. Repeat the check until you find a respirator that passes the seal check.

Record Keeping

A written copy of this program along with the OSHA Respiratory Protection Standard is kept in the Program Administrator's office and is available to all employees who wish to review it.

Also maintained in the Program Administrator's office are copies of training and fit-test records. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit-tests are conducted.

The Program Administrator will also maintain copies of the medical records for all employees covered under the respirator program. The completed medical questionnaire and the physician's documented findings are confidential and will remain with the physician who completed the medical evaluation. The company will only retain the physician's written recommendation regarding each employee's ability to wear a respirator.

Voluntary Use of Respirators

An employee may decide to wear a respirator during certain operations in non-hazardous areas. The Program Administrator will review each such request on a case-by-case basis. An employee may use the respirator provided or may provide his/her own for voluntary use, if

- doing so does not jeopardize the employee's health or safety, or that of his/her co-workers.
- the equipment itself does not create a workplace hazard.
- the Program Administrator has approved the use of the respirator.

All employees voluntarily wearing respirators are required to receive a copy of Appendix D Information for Employees Using Respirators When Not Required Under the Standard located at the end of this program. The Program Administrator will review this OSHA information with each employee prior to their voluntary use of respiratory protective equipment.

In addition, employees voluntarily using tight-fitting respirators must follow the medical surveillance, cleaning, maintenance and storage procedures in this program. The Program Administrator may assign other additional program requirements for those voluntarily wearing respirators or other personal protective equipment.

Employees voluntarily wearing dust masks, filtering facepiece also known as N95 Particulate Filtering Facepiece, are not subject to the program's medical evaluation. However, their mask must be clean and free of contamination

and not interfere with the employee's ability to work safely. These employees will also be provided a copy of Appendix D and the information reviewed with them before their use of dust masks.

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

(63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998)

Specific Worksite Information:

Worksite Name:	Worksite Address:

Required Respirator for Jobsite:

Work activity-Light, Moderate or Heavy	Contaminants	Type of Respirator and Filter or Cartridge	Other Personal Protective Equipment

Short Service Employee Program:

Purpose

Gering Valley Plumbing & Heating, Inc. has established this Short Service Program to give new employees the skills they need to do their jobs safely and protect themselves and co-workers from injury.

Doneta Schlaepfer has been assigned as the Program Administrator for our Short Service Employee Program. The Program Administrator will oversee all aspects of this program and be responsible for reviewing these written procedures at least annually, or more frequently, if it is determined the procedures are not effective.

Scope

This program applies to all company facilities, worksite(s), departments, teams, and subcontractors. Each short service employee will stay in the program at least six months. These employees will not leave the program until they demonstrate the knowledge and skills necessary to do their job safely.

Definitions

Mentoring

A process of transferring skills and knowledge from one person to another in a work environment.

Mentoring Supervisor

The person responsible for directly supervising and overseeing an employee.

Short Service Employee (SSE)

A newly hired permanent employee, temporary employee, or contractor with less than six months experience in their assigned job.

Short Service Mentor

Person with at least six months employment with the company who has demonstrated competent work skills for the tasks assigned. The mentor will be fluent in the language the SSE best understands.

Crew Composition

Short service employees should make up no more than 50 percent of a single crew at one time. A crew of five or fewer employees should include no more than one short service employee at a time. Subcontractors and independent contractors are included in this program.

Process

Our company has built its short service employee program on four core steps. The process starts before a new hire comes on board and continues throughout their employment with the company.

Step 1: Assign SSE Program Responsibilities

A proactive short service employee program requires collaboration among multiple departments. Everyone must understand and embrace their responsibilities.

- We all bring unique perspectives and skills to the company's safety program. But some responsibilities are so important that we all share these responsibilities.
  - Lead by example:
    - Always follow safety procedures, even if it takes longer to do the task.
    - Keep a positive safety attitude.
    - Participate in safety meetings.
    - Accept accountability for your safety and your co-workers' safety.
  - Train new employees:
    - Teach SSEs the hazards of the job.

        - Show them how to do their jobs safely.
        - Monitor them to make sure they follow safety procedures.
        - Do not let SSEs do any task they have not been trained to do safely.
- **Management Responsibility**. Management support is critical to every aspect of our safety program, including our SSE program. Management is responsible for providing a workplace free from recognized hazards and ensuring employees receive safety training in a language they understand.
    - Set expectations:
        - Make it clear that safety is more important than production.
        - Establish a written, signed, and dated safety policy that sets compliance expectations for management and employees.
        - Make sure the policy addresses safety orientation for new employees and employees who are new to a task.
        - Don't let the safety program become a shelf document that only gets used when an accident happens. Make sure all employees have access to the SSE program and other safety policies and procedures.
    - Provide resources:
        - Commit the financial and leadership resources necessary to support the company's long-term safety objectives.
        - Provide resources that help supervisors, mentors, and safety professionals overcome language barriers that compromise safety.
- **Supervisor Responsibility**. Supervisors are our "boots on the ground". You are in a good position to positively influence new workers and demonstrate the company's commitment to safety.
    - Make sure SSEs are identifiable:
        - Always know which jobs and crews are using short service employees.
        - Ensure SSEs are appropriately identified per this plan.
    - Prepare mentors:
        - Help identify mentors that meet the requirements of this program.
        - Ensure mentors adequately train SSEs.
    - Develop Job Safety Analyses (JSAs):
        - Supervisors will develop and communicate job safety analyses to affected employees prior to beginning work when they are assigned to a task and when the operation changes.
- **Mentor Responsibility**. There is no substitute for on-the-job experience. Our company relies on seasoned veterans to pass on their knowledge and skills to the next generation of workers.
    - Introduce the SSE checklist (Attachment B):
        - The checklist is a tool to train the SSE and monitor their progress. Review the SSE checklist with the new employee periodically over a six-month period and forward information on the SSE's progress to appropriate supervisors and management.
    - Evaluate SSEs:
        - Mentors with evaluate whether SSEs understand safety training by listening to them and watching them do their jobs. During observations, mentors will avoid interfering as long as the SSE is not in a position to harm themselves, others, the environment or the equipment.
- **Short Service Employee Responsibility**. Management will give new employees the tools they need to avoid accidents. But employees are ultimately responsible for their own safety.
    - Be trainable:
        - Remember that your primary job is to learn how to do each task safely.
        - Take direction from the assigned mentor, supervisor and management.
        - Ask for help if you do not understand safety procedures for any reason, including language barriers.
    - Exercise stop work authority:
        - We expect you to stop any operation you feel is unsafe. Nobody will reprimand you for exercising your stop work authority. (**See Stop Work Authority for further information**.)
- **Program Administrator Responsibility**. The Program Administrator is the company's expert on safety matters. As the Program Administrator, you play a critical role in our SSE program's success.
    - Serve as a resource:

- The Program Administrator provides support to management, supervisors and SSEs on safety related issues and serves as a secondary SSE mentor.

- Train and evaluate:
  - Ensures each SSE gets the necessary safety orientation and training before sending them to the field. They also monitor the SSE's progress through field observations and discussions with assigned mentor(s) and determine whether the SSE requires additional training and mentoring.
- Continuously improve the SSE program:
  - The Program Administrator shall review and revise the mentor program and responsibilities as needed and ensure mentors are qualified to teach SSEs.

Step 2: Notify Relevant Parties (Attachment A)

When the company hires or reassigns an employee, the HR department will notify management, appropriate supervisors and the Safety Officer.

- **Identifying New Hires**. Supervisors and co-workers must be able to easily spot short service employees so they can provide guidance on the job. The company's new hire identification system tells the team the short service employee is in a transitional period. It is not a designation of inexperience or lower skill sets.
  - SSE identification systems can include the following:
    - Vests
    - Colored hardhats
    - Recognizable clothing or PPE
    - Decals – Decals should be placed on each side of the hardhat with a label under the decal indicating the date the employee will no longer be considered an SSE. The supervisor removes the decals and other identifiers upon expiration of the SSE term and after verifying the SSE can do the job safety.

Step 3: Train New Employees on Safety Policies and Procedures

Safety is an important business metric, equal to quality and productivity. The company's training program will prepare new hires to recognize and control the hazards of their jobs. The program includes new hire orientation and ongoing safety training.

- **New Hire Orientation**. Management will provide company approved safety orientation training in a language the employee understands. Safety training will be tailored to each SSE's job and it will include how to access company policies, standards, and procedures. To facilitate the process, supervisors will review the job orientation checklist (Attachment C) with the SSE. When the SSE satisfactorily completes orientation, the supervisor and employee will sign and date the checklist.
- **Ongoing Safety Training**. The supervisor will ensure each SSE is properly trained per federal, state and internal requirements, as well as best management practices. Ongoing safety training will be provided when an employee is hired, given a new assignment, or exposed to new hazards due to changes in the substances, processes, procedures, and equipment in the work area. The training will be delivered in a language the employee understands. SSEs will learn to recognize the unique hazards of their jobs. The company will teach SSEs how to protect themselves by following safety procedures and using personal protective equipment.
- **Selecting Mentors**. We count on our veteran employees to share their knowledge and experience with new workers. Supervisors will help select mentors and ensure they adequately train new hires.
  - Mentor qualities:
    - Experience with the new worker's tasks.
    - Track record for working safely.
    - Clear communicator who can explain the hazards of the job.
    - Speaks the SSE's primary language.
    - Knows how to build the SSE's confidence.
    - Qualified to teach the SSE the proper way to create and follow a quality JSA.
    - Committed to staying current on trends and technology in the industry.
    - Patient and eager to devote the time necessary to help new workers succeed.
- **Making Safety a Universal Language**. OSHA requires employers to train workers in a language they understand. Language differences can affect our ability to effectively communicate safety messages to

employees. Some of the following are training techniques we will use to communicate the importance of safety while completing tasks:

- Use more pictures and fewer words.
- Keep training simple
- Provide hands-on demonstrations.

Step 4: Continuously Evaluate and Improve the SSE Program

Like any part of our safety program, the SSE program must continuously evolve to meet our changing needs. The Program Administrator shall review the SSE program's effectiveness at least annually or sooner if the procedures are deemed ineffective.

- **Audit Documentation**. Management will audit SSE training documentation for accuracy, timeliness, and completeness.
- **Conduct Inspections**. Onsite inspections will be conducted to ensure supervisors, mentors, and short service employees are adhering to the SSE program.

Attachment A

COMPANY SHORT SERVICE EMPLOYEE NOTIFICATION FORM

Short Service Employee Information (completed by HR Specialist)

Employee Name (Print):	
Employee Hire Date:	Change Date:
Current Job Title:	
Time in Present Position:	
Years of Experience:	
Types of Experience:	

SSE Mentor Information (completed by Supervisor)

Employee Name (Print):	
Employee Hire Date:	
Current Job Title:	
Time in Present Position:	
Years of Experience:	
Types of Experience:	

Supervisor Sign-Off (Send to Project Manager)

Print Name:	Print Job Title:	Signature:

Send to Safety and HR Directors and retain in employee's files.

Employee has received the required Safety Orientation.	Yes		No	
Employee has received all required Safety Training.*	Yes		No	
Employee has received the required safety training except (Attach list of any exceptions)	Yes		No	

* Safety training shall be determined and conducted by individual company policies and procedures, in compliance with all regulatory requirements

Attachment B

SHORT SERVICE EMPLOYEE CHECKLIST

Mentor's Initials as Completed	SSE Initials as Completed	**Short service employee understands company expectations for safe behaviors.**
		Does not take unnecessary risks.
		Asks for help when needed.
		Does not try to lift or handle too heavy of a load. Gets mechanical help when needed.
		Raises awareness of possible hazards.
		Intervenes with unsafe behaviors.
		Understands his/her "stop work" authority and responsibility.
		Short service employee demonstrates ability to do job required:
		Works in a craftsman-like manner.
		Has clear understanding of job to be done.
		The new employee can use tools safely by:
		Communicating safe work practices for assigned tools.
		Demonstrating safe use of assigned tools.
		Observing tool use of others and noting safe and unsafe behaviors.
		New employee can identify the following at the work site:
		Struck by hazards.
		Crushed by hazards.
		Burn and scald hazards.
		Sharp objects and precautions.
		Trip hazards and precautions.
		Electrical hazards and precautions.
		Fall hazards and precautions.
		Hot and/or cold surfaces, piping, and equipment.
		Chemical hazards and precautions.
		Emergency procedures.
		Emergency communication.
		Respiratory hazards and precautions.
		Toxic substance hazards and precautions (ex. Bromide).
		Any additional hazards specific to the job site.

Attachment B Continued

		Short Service Employee exhibits compliance with:
		General safety rules and policies.
		Safety rules and policies specific to the job being performed.
		Housekeeping policies.
		PPE requirements.
		Short Service Employee has demonstrated competence on the following equipment:
		a. Equipment Name:
		b. Equipment Name:
		c. Equipment Name:
		Other:

_____ _____

Mentor **New Employee**

_____ _____

Today's Date **New Hire Date**

Review Dates: **30-day review_____60-day review_____90-day review_____**

120-day review_____150-day review_____180-day review_____

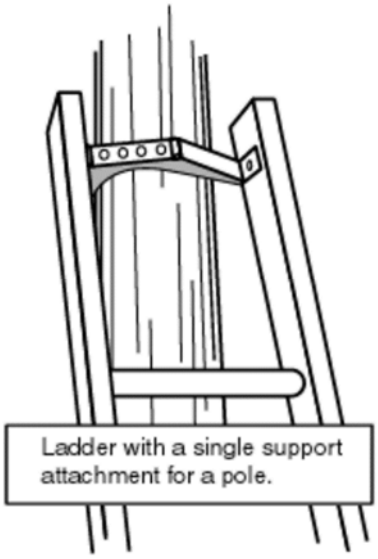
Correct Ladder Usage:

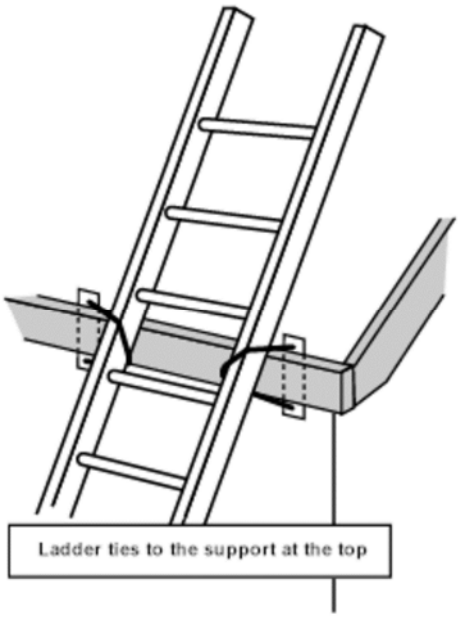
Stepladders

- Do not place tools or materials on the steps or platform of a stepladder
- Do not use the top two steps of a stepladder as a step or stand.
- Always level all four feet and lock spreaders in place.
- Do not use a stepladder as a straight ladder.

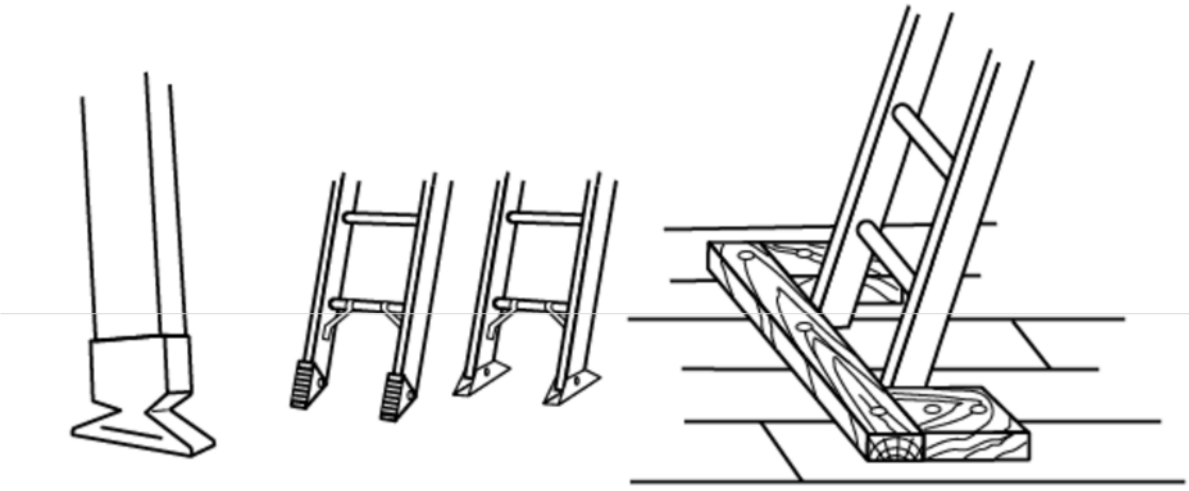
Straight Type or Extension Ladders

- All straight or extension ladders must extend at least three feet beyond the supporting object when used as an access to an elevated work area.
- After raising the extension portion of a two or more-stage ladder to the desired height, check to ensure that the safety dogs or latches are engaged.
- All extension or straight ladders must be secured or tied off at the top.

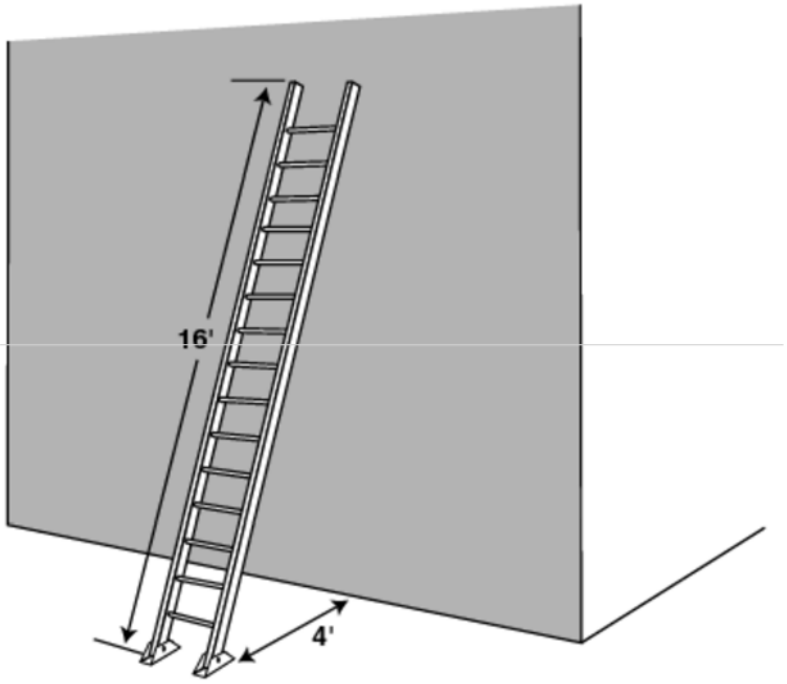




- All ladders must be equipped with safety (non-skid) feet.



- Portable ladders must be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder.



Silica – Appendix A to Standard 1910.1053:

Methods of Sample Analysis

This appendix specifies the procedures for analyzing air samples for respirable crystalline silica, as well as the quality control procedures that employers must ensure that laboratories use when performing an analysis required under 29 CFR 1910.1053 (d)(5). Employers must ensure that such a laboratory:

1. Evaluates all samples using the procedures specified in one of the following analytical methods: OSHA ID-142; NMAM 7500; NMAM 7602; NMAM 7603; MSHA P-2; or MSHA P-7;

2. Is accredited to ANS/ISO/IEC Standard 17025:2005 with respect to crystalline silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 for implementation of quality assessment programs;

3. Uses the most current National Institute of Standards and Technology (NIST) or NIST traceable standards for instrument calibration or instrument calibration verification;

4. Implements an internal quality control (QC) program that evaluates analytical uncertainty and provides employers with estimates of sampling and analytical error;

5. Characterizes the sample material by identifying polymorphs of respirable crystalline silica present, identifies the presence of any interfering compounds that might affect the analysis, and makes any corrections necessary in order to obtain accurate sample analysis; and

6. Analyzes quantitatively for crystalline silica only after confirming that the sample matrix is free of uncorrectable analytical interferences, corrects for analytical interferences, and uses a method that meets the following performance specifications:

6.1 Each day that samples are analyzed, performs instrument calibration checks with standards that bracket the sample concentrations;

6.2 Uses five or more calibration standard levels to prepare calibration curves and ensures that standards are distributed through the calibration range in a manner that accurately reflects the underlying calibration curve; and

6.3 Optimizes methods and instruments to obtain a quantitative limit of detection that represents a value no higher than 25 percent of the PEL based on sample air volume.

[81 FR 16865-16866, March 25, 2016]

Trenching/Shoring/Excavation Guidelines:

MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V)(1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(3)
STABLE ROCK	VERTICAL (90º)
TYPE A (2)	3/4:1 (53º)
TYPE B	1:1 (45º)
TYPE C	1 ½:1 (34º)

Footnote(1) Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

Footnote(2) A short-term maximum allowable slope of 1/2H:1V (63º) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53º).

Footnote(3) Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

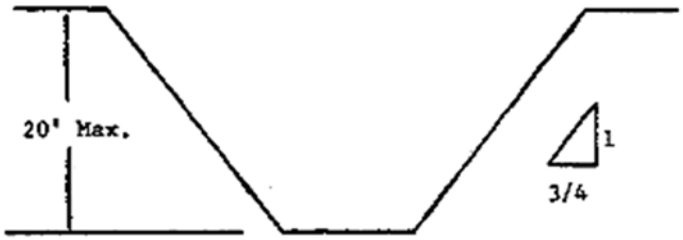
Figure B-1

Slope Configurations

(All slopes stated below are in the horizontal to vertical ratio)

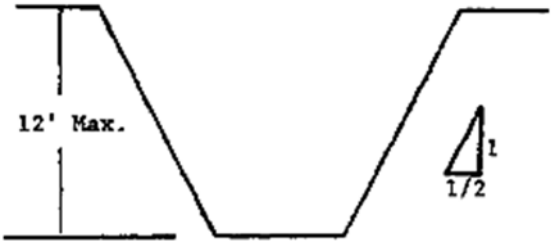
B-1.1 Excavations made in Type A soil.

1. All simple slope excavation 20 feet or less in depth shall have a maximum allowable slope of ¾:1.



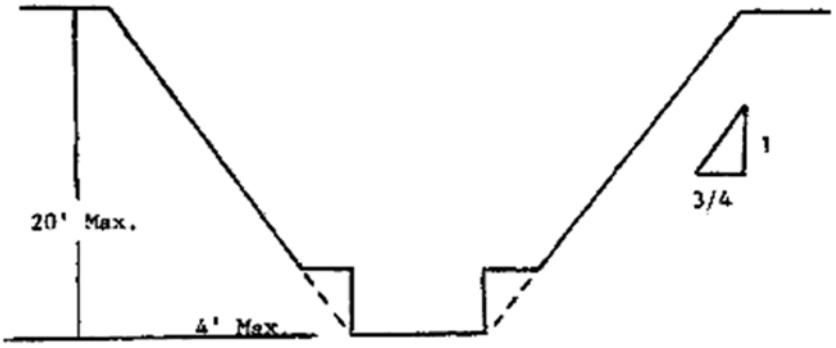
SIMPLE SLOPE -- GENERAL

Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of ½:1.

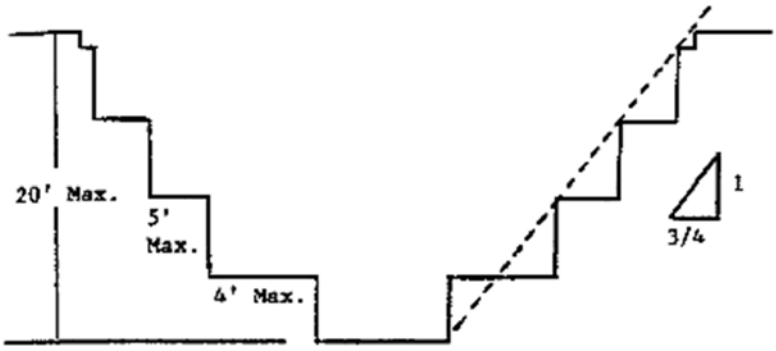


SIMPLE SLOPE -- SHORT TERM

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 3/4 to 1 and maximum bench dimensions as follows:

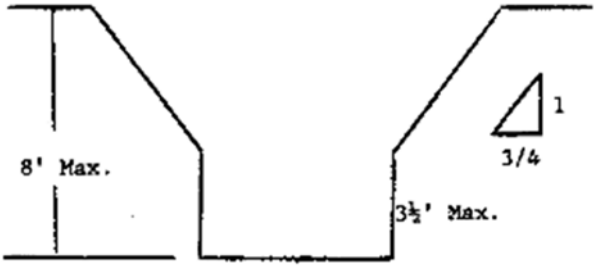


SIMPLE BENCH



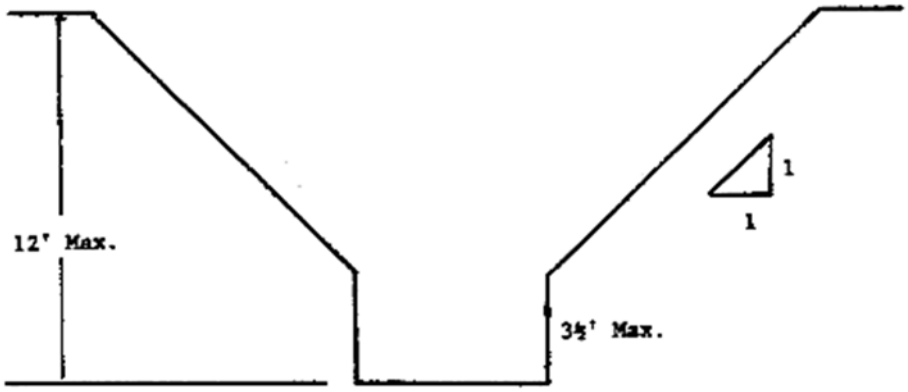
MULTIPLE BENCH

3. All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of 3½ feet.



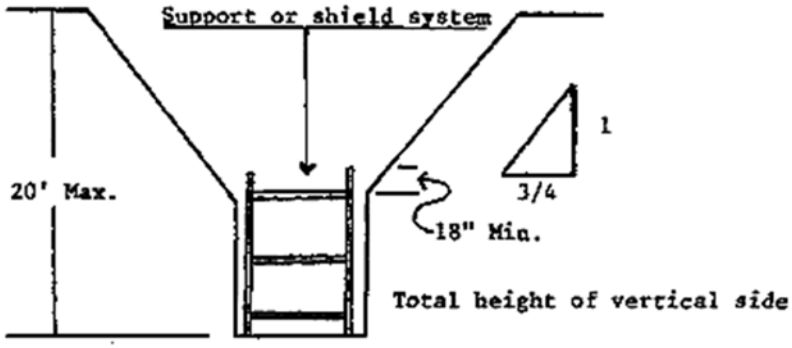
UNSUPPORTED VERTICALLY SIDED LOWER PORTION -- MAXIMUM 8 FEET IN DEPTH)

All excavations more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of 3½ feet.



UNSUPPORTED VERTICALLY SIDED LOWER PORTION -- MAXIMUM 12 FEET IN DEPTH)

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of ¾:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

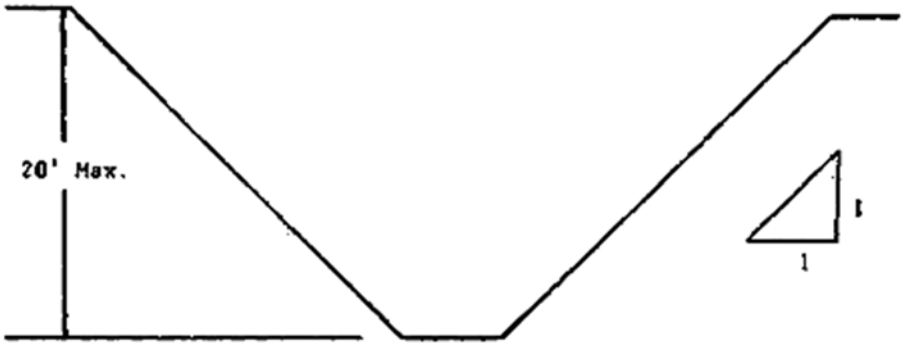


SUPPORTED OR SHIELDED VERTICALLY SIDED LOWER PORTION

4. All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other options permitted under § 1926.652(b).

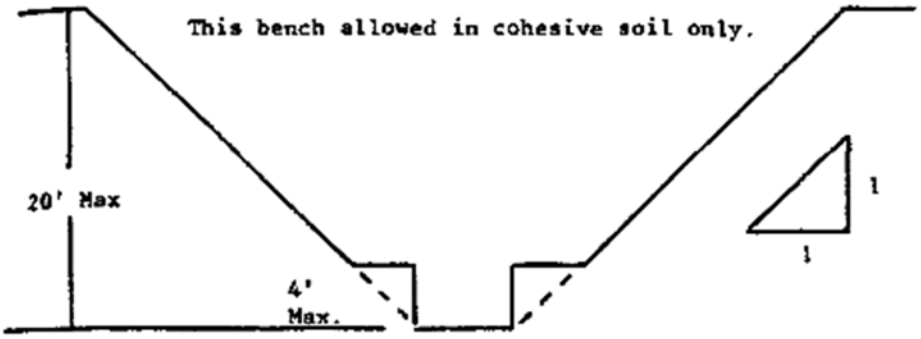
B-1.2 Excavations Made in Type B Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.

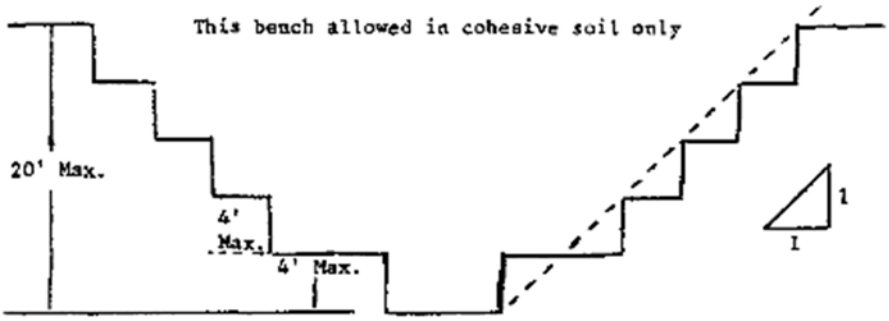


SIMPLE SLOPE

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as follows:

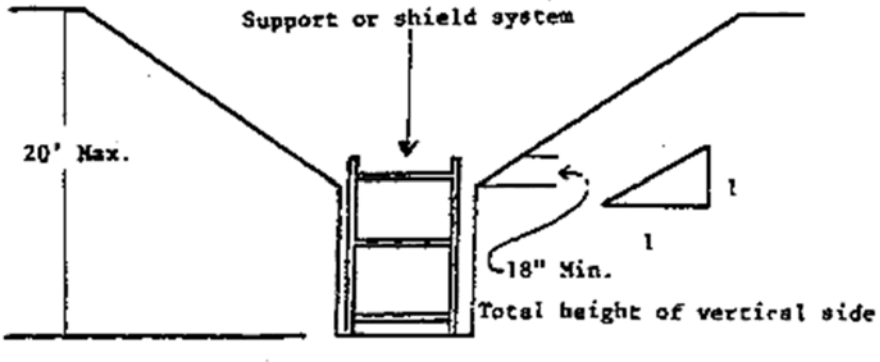


SINGLE BENCH



MULTIPLE BENCH

3. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1:1.

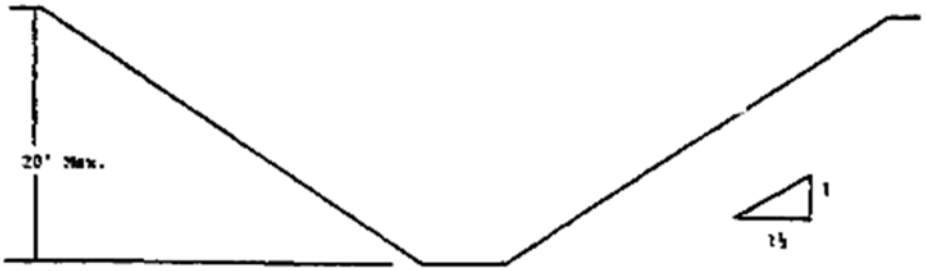


VERTICALLY SIDED LOWER PORTION

4. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

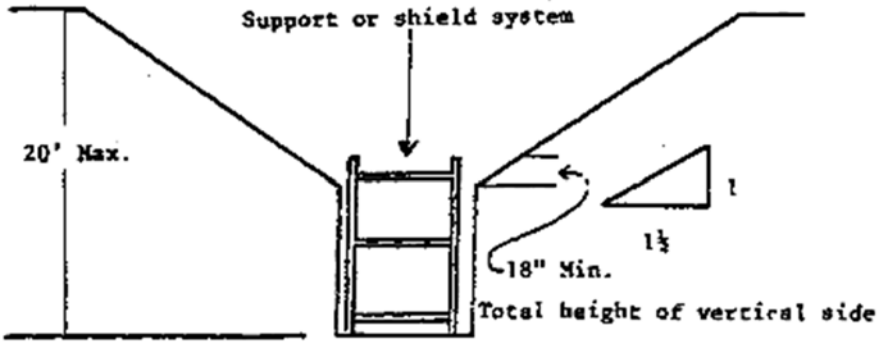
B-1.3 Excavations Made in Type C Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1½:1.



SIMPLE SLOPE

2. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1½:1.

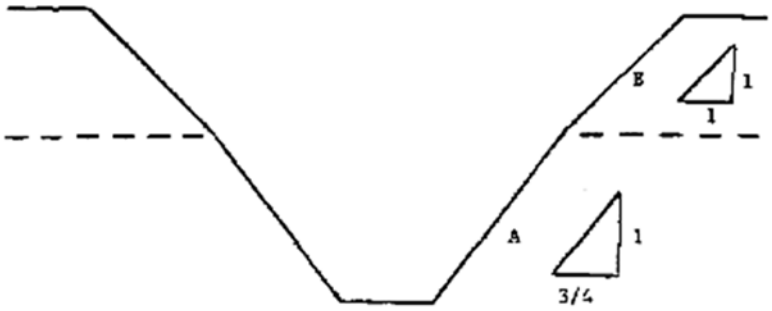


VERTICAL SIDED LOWER PORTION

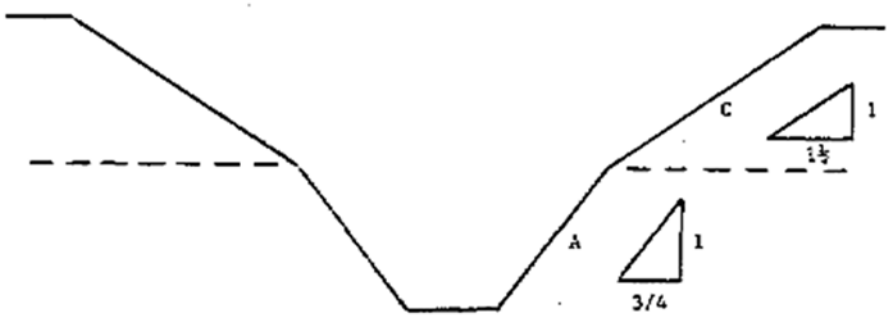
3. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

B-1.4 Excavations Made in Layered Soils

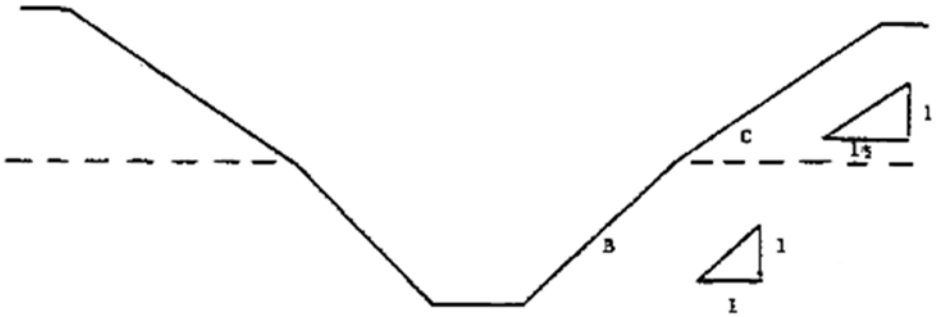
1. All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below.



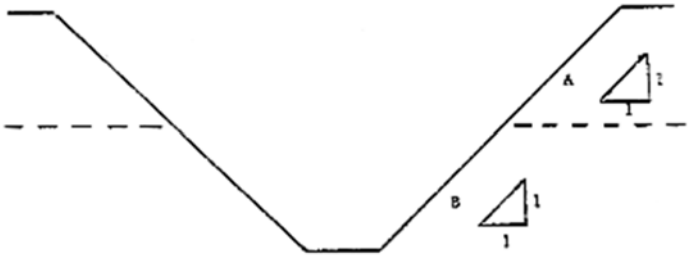
B OVER A



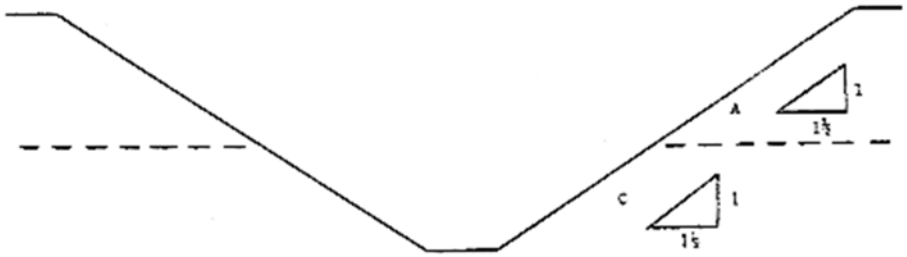
C OVER A



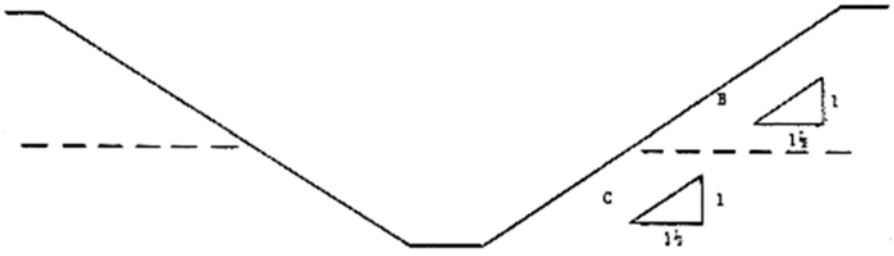
C OVER B



A OVER B



A OVER C



B OVER C

Fall Protection Work Plan

COMPANY:_____ DATE:_____

SITE ADDRESS:_____

REPORT PREPARED BY:_____ TITLE:_____

1. Specific Work Area:_____
2. Activities:_____
3. Identify All Fall Hazards in this Area:_____
   _____
   _____
   _____
4. Check the method of fall restraint or arrest to be utilized:
   - ☐ Standard Guardrail
   - ☐ Secured to Existing Structure
   - ☐ Shock Absorbing Lanyard
   - ☐ Scaffold W/Guardrail
   - ☐ Warning Line
   - ☐ Full Body Harness
   - ☐ Tie-Off Point Capable of 500 LB/Person
   - ☐ Retractable Lanyard
   - ☐ Other (Specify)
   - ☐ Warning Line & Safety Monitor (See WAC 296-155-24521)
   - ☐ Scissor Lift
   - ☐ Boom Lift
   - ☐ Forklift Basket
5. Describe procedures for assembly, maintenance, inspection and disassembly of the system (if additional space is required, complete on the back of this form or attach a separate sheet).
   _____
   _____
   _____
   _____
6. Describe procedures for handling and securing tools, equipment and materials, and for providing overhead protection for workers (if additional space is required, complete on the back of this form or attach a separate sheet).
   _____
   _____
   _____
   _____
7. Describe the method for prompt, safe removal of injured worker(s) **Note: calling 911 is not sufficient as a means of rescue**:_____
   _____
   _____
   _____
8. I certify that I have received Fall Protection Orientation, including the material covered in this Fall Protection work plan.

Employee Name:	Date:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Job Safety Analysis Worksheet

TITLE OF JOB OPERATION:_____ Date:_____

Title of person performing job:_____

Employee observed:_____ Location:_____

Analysis made by:_____ Analysis approved by:_____

Sequence of basic job steps	Potential accidents or hazards	Recommended safe job procedures

Personal protective equipment required for this position:

Other hazards that may develop and will be addressed in our safety meetings:

Personal Protective Equipment (PPE) Issue Record

Employee's name:	
Job title:	

**Note: this form should be retained in the employee's personnel file.*

The PPE listed below has been issued to the employee named above in accordance with OSHA 1926.20(f)(1), 1926.28(a) and 1926 Subpart E.

The employee has a responsibility to:

- take reasonable care of the PPE provided;
- use PPE in accordance with the training and instruction given;
- to keep the PPE clean and return it to its place of storage after use; and
- report any loss or defect of PPE immediately to his/her supervisor and/or management.

TYPE OF PPE ISSUED	DATE ISSUED	EMPLOYEE'S SIGNATURE

Employee Hepatitis B Form

Instructions: All employees with a job classification that puts them at risk for exposure to bloodborne pathogens must complete this form.

1. Please fill out the Employee Information section.
2. If you have already received the hepatitis B vaccination, then complete the Vaccine Received section.
3. If you have not received the hepatitis B vaccination, complete either the Acceptance or Statement of Nonparticipation section.

Employee Information:
Employee Name (Print): _____ ID Number: _____

Job Title: _____ Supervisor Name: _____

❑ Vaccination Received

I have already received the Hepatitis B vaccination from: _____
(name of physician or clinic)

Approximate dates: _____ 1st dose _____ 2nd dose _____ 3rd dose

_____ _____
Employee Signature Date

❑ Vaccination Acceptance

I have received information and training pertaining to hepatitis B and the vaccine. I have had the opportunity to ask questions, and they have been answered to my satisfaction. I understand the benefits and risk of the vaccine and I consent to receive this vaccine. I understand that I am responsible for scheduling and keeping my appointments to receive the hepatitis B vaccine in accordance with the recommended series (three dose vaccination series; 0, 1 and 6 months apart).

_____ _____
Employee Signature Date

❑ VaccinationDeclination(Statement of Non-Participation)

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

_____ _____
Employee Signature Date

Employee Acknowledgment

I hereby acknowledge receipt of the Gering Valley Plumbing & Heating, Inc. Safety Manual. I understand that it is my responsibility to become familiar with the contents of this Safety Manual, and I agree to follow the policies and procedures contained therein. I acknowledge and agree that this Written Safety Manual supersedes all other Safety Manuals that I have previously received.

In consideration of my employment, I agree to abide by the written Safety Policies and Procedures of Gering Valley Plumbing & Heating, Inc. and agree that my employment and compensation can be terminated if these practices are not followed. I understand that no manager or representative of Gering Valley Plumbing & Heating, Inc. other than the Owner/President has the authority to make any agreement contrary to the foregoing and that such changes must be in writing and in accordance with OSHA compliance regulations.

My signature below certifies that I understand that I have received the written Safety Manual of Gering Valley Plumbing & Heating, Inc. and agree to follow the guidelines that are written within it for the duration of my employment. This Agreement supersedes all prior agreements, understandings, and representations concerning the receipt of the written Safety Practices in this manual.

DATE: _____

_____

Employee Signature

_____

Print Name