PRO-TECH ELECTRIC, INC.

515 N. Smith Ave. Ste. 112
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INJURY AND ILLNESS

PREVENTION PLAN

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SAFETY FORMS PACKAGE

GENERAL SAFETY FORMS APPENDIX

- POLICIES AND PROCEDURES ACKNOWLEDGEMENT FORM
- SAFETY MEETING MINUTES FORM
- EMPLOYEE TRAINING RECORD
- JOB SITE SAFETY INSPECTION FORM
- ACCIDENT INVESTIGATION FORM
- SAFETY COUNSELING STATEMENT FORM
- RECEIPT FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)
- REPORT OF UNSAFE CONDITION OR HAZARD

LOCKOUT/TAGOUT APPENDIX

A- LOCKOUT/TAGOUT PROCEDURES
B- LOCKOUT/TAGOUT REMOVAL PROCEDURES
C- LOCKOUT/TAGOUT PERIODIC INSPECTION RECORD
D- LOCKOUT/TAGOUT TRAINING RECORD

SAFETY POLICY STATEMENT

Pro-Tech Electric is committed to providing a safe, accident-free, and healthy work environment for everyone. The management of Pro-Tech Electric assumes the responsibility and is prepared to take the necessary actions to ensure that safety, health rules and practices are followed and to see that effective training programs are employed. Safety should never be sacrificed for production. Safety is an integral part of quality control, cost reduction and job efficiency.

Workers who notice hazards or other safety problems, or feel that they need additional training, must notify their supervisor. Supervisors and management at all levels must address these concerns and take corrective action when warranted. Everyone is obligated to know the safety standards for their area or job, and just as important, to abide by them.

Every supervisor will be held accountable for the safety performance of the employees they supervise. Supervisors must instill a positive attitude and safety awareness in their workers through personal adherence, personal contact, training, and regularly scheduled safety meetings. It is the duty of all employees to perform their work with maximum regard for the safety of themselves and co-workers. Our safety policies are based on past experience and current standards, and are also an integral part of the company's personnel policies.

This means that compliance with these policies is a condition of employment and must be taken seriously. Failure to comply with our safety policies is sufficient grounds for disciplinary action or for termination of employment.

The goal of Pro-Tech Electric is the elimination of accidents and injuries from our operations.

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John Dey, President

GOALS

Safety begins at the top and goes downward throughout the company. The primary goal of Pro-Tech Electric is to continue operating a profitable business while protecting employees from injuries, illness or harm. This can be achieved in part by delegating responsibility and accountability to all involved in this company's operation.

- Responsibility: Having to answer for activities and results.

- Accountability: The actions taken by management to insure the performance of responsibilities. In other words, to reach our goal of a safe workplace everyone needs to take responsibility and be held accountable.

Benefits of achieving our goals are:

- Minimizing of injuries and accidents
- Minimizing the loss of property and equipment
- Elimination of potential fatalities
- Elimination of potential permanent disabilities
- Elimination of potential CAL-OSHA fines
- Reductions in workers' compensation costs
- Reductions in operating costs
- Having the best Safety and Health conditions possible in the workplace.

MANAGEMENT COMMITMENT

The management of Pro-Tech Electric is committed to the company's safety policy, and to provide direction and motivation by:

- Appointing Shane Cutler as our Safety Coordinator.
- Establishing company safety goals and objectives.
- Developing and implementing a written Safety and Health program.
- Ensuring total commitment to the Safety and Health program.
- Facilitating employees' safety training.
- Establishing responsibilities for management and employees to follow.
- Ensuring that management and employees are held accountable for performance of their safety responsibilities.
- Establishing and enforcing disciplinary procedures for employees.
- Reviewing the Safety and Health program annually, and revising or updating as needed.

RESPONSIBILITY

SAFETY COORDINATOR

The Injury and Illness Prevention Program (IIPP) administrator, Shane Cutler, has the authority and the responsibility for implementing and maintaining this IIPP for Pro-Tech Electric. The cell phone and office phone numbers to contact Shane Cutler are:

Office: (951) 737-1945

Cell: (951) 858-3673

It is the duty of the Safety Coordinator to assist the Supervisor and all other levels of Management in the initiation, education, and execution of an effective safety program including the following:

- Reviewing the safety program with new employees.
- Documenting the IIPP review with the Policies and Procedures Acknowledgement form.
- Following up on recommendations, suggestions, etc., made at Safety Meetings.
- Assisting employees in the execution of safety policies.
- Conducting safety inspections on a periodic basis.
- Addressing existing or potential hazards as needed.
- Preparing accident reports and investigations.
- Maintaining an adequate stock of first aid supplies and other safety equipment to insure their immediate availability.
- Becoming familiar with CAL-OSHA regulations and local and state safety codes.
- Emphasizing to employees that accidents create unnecessary personal and financial losses.

MANAGER

Each Manager is responsible for implementing and maintaining the IIPP in their work areas and for answering employee questions about the IIPP. A copy of this IIPP is available from Shane Cutler.

It is the responsibility of the Manager to establish a work environment that ensures that safety and health is managed in the same manner and with the same degree of emphasis as production, cost, and quality control, by:

- Regularly emphasizing that accident and health hazard exposure prevention are not only moral responsibilities, but also a condition of employment.
- Identifying procedures that could contribute to accidents which can result in injuries and property damage.
- Participating in safety and health related activities, including routinely attending safety meetings, reviews of the facility, and correcting employee behavior that can result in accidents and injuries.

- Spending time with each person hired explaining the safety policies and the hazards of his/her particular work.
- Ensuring that initial orientation of "new hires" is carried out by Shane Cutler.
- Not short-cutting safety for expediency, or allowing workers to do so.
- Enforcing safety rules consistently, and following the company's discipline and enforcement procedures.
- Conducting periodic workplace safety inspections and correcting noted safety violations.

EMPLOYEES

It is the duty of each and every employee to know the safety rules, and conduct their work in compliance with these rules. Disregard of the safety and health rules shall be grounds for disciplinary action up to and including termination. It is also the duty of each employee to make full use of the safeguards provided for their protection. Every employee will receive an orientation when hired and receive a copy of the work and safety rules that apply to their work duties.

Employees are encouraged to report any unsafe acts, procedures or conditions they may observe on the job site. Employees are informed they may report these conditions without fear of reprisal or reprimand.

Employee responsibilities include the following:

- Reading, understanding and following safety and health rules and procedures.
- Signing the Policies and Procedures Acknowledgement form.
- Wearing Personal Protective Equipment (PPE) at all times when working in areas where there is a possible danger of injury.
- Wearing suitable work clothes as determined by the Supervisor.
- Performing all tasks safely as directed by their Supervisor.
- Reporting ALL injuries, no matter how slight to their Supervisor immediately, and seeking treatment promptly.
- Knowing the location of first aid supplies, firefighting equipment, and other safety devices.
- Attending required safety and health meetings.
- Not performing potentially hazardous tasks, or using any hazardous material until properly trained, and following all safety procedures when performing those tasks.
- STOPPING AND ASKING QUESTIONS IF EVER IN DOUBT ABOUT THE SAFETY OF ANY OPERATION.

Each Manager is responsible for implementing and maintaining the IIPP Program in their work area and for answering worker questions about the IIPP Program. A copy of this IIPP Program is available from each Manager.

COMPLIANCE

All employees of Pro-Tech Electric, including managers and supervisors, are responsible for complying with safe and healthful work practices. Our system of ensuring that all employees comply with these practices include the following practices:

- Informing employees of the provisions of our IIPP Program
- Providing training to employees whose safety performance is deficient
- Constructive criticism/instruction by the employee's Supervisor to educate and inform employees of appropriate safety performance and behavior.
- Recognizing employees who perform safe and healthful work practices.
- Disciplining workers for failure to comply with safety and healthful work practices.
- Correcting employee's negative behavior to the extent required.
- Informing the employee that continued violation of company safety policies may result in termination.
- Written documentation of disciplinary warnings and corrective action taken.

Depending on the facts and circumstances involved with each situation, the company may choose any corrective action including immediate termination. However, in most circumstances the following steps will be followed:

1. VERBAL WARNING informally documented, by Supervisor or Safety Coordinator for minor infractions of company safety rules. The Supervisor or Safety Coordinator must inform the employee what safety rule or policy was violated and how to correct the problem.

2. WRITTEN WARNING, documented in employee's file. Repeated minor infractions or a more substantial safety infraction requires issuance of a written warning. Every attempt should be made to re-educate the employee on the desired performance. The employee should acknowledge the warning by signing the document before it is placed in their personnel file.

3. SUSPENSION, for three (3) working days if employee fails to appropriately respond or management determines the infraction is sufficiently serious.

4. TERMINATION, for repeated or serious safety infractions.

COMMUNICATION

All managers and supervisors of Pro-Tech Electric are responsible for communicating with all employees about occupational safety and health in a form readily understandable by all employees. Our communication system encourages all employees to inform their Supervisor about workplace hazards without fear of reprisal.

Our communication system includes the following items:

- New employee orientation including a discussion of safety and health policies and procedures
- Review of our IIPP Program
- Training programs
- Regularly scheduled safety meetings
- Effective communication of safety and health concerns between workers and supervisors., including translation where appropriate.
- Posted or distributed safety information
- A system for employees to anonymously inform management about workplace hazards
- Other:

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HAZARD ASSESSMENT

Inspections to identify and evaluate workplace hazards shall be performed by a competent observer.

Pro-Tech Electric has established a formal process for identifying existing or potential hazards in job sites. The Supervisor will ensure all employees and all sub-contractors are actively involved in the hazard identification process. Hazards found will be reviewed with all employees concerned. Our employees and their elected representatives are encouraged to be involved in the development of our safety and health program goals, objectives, and performance measures as well as the identification and control of hazards in the workplace.

Our Hazard Assessment will ensure that hazards discovered are classified/prioritized and addressed based on the risk associated with the task. Our hazard identification process will be used for routine and non-routine activities as well as new processes, changes in operation, products or services

- The Supervisor shall be trained in good hazard identification techniques, as well as ranking hazards identified based on potential severity.
- The Supervisor shall conduct a weekly formal inspection of the job site using the proper form documentation. An employee selected at random should accompany the Supervisor on the inspection.
- The Supervisor should be informally inspecting the job site as an ongoing process.
- Job site inspection methods and purposes should be a frequent topic in employee and subcontractor safety meetings.

Where feasible, workplace hazards are prevented by effective design of the job. Where it is not feasible to eliminate such hazards, they must be controlled to prevent an unsafe or unhealthy exposure. Once a potential hazard is recognized, the elimination or control of the hazard must be done in a timely manner. These procedures include measures such as the following:

- Maintaining all extension cords and electrical equipment in good working order.
- Ensuring all guards and safety devices are working and in place.
- Ensuring ladders are in good condition.
- Ensuring that scaffolding is properly erected.
- Ensuring that employees, and subcontractor employees, are wearing required PPE.
- Establishing a medical program that provides applicable first aid supplies in the workplace, as well as emergency phone numbers (911).
- Addressing any and all safety hazards with employees.

ACCIDENT/INCIDENT EXPOSURE INVESTIGATIONS

Pro-Tech Electric will provide the proper equipment (camera, measuring and weighing devices, etc.) to aid in the investigation. Employees assigned Incident Investigation responsibilities will be trained in their roles and responsibilities for incident response and incident investigation techniques. Initial identification of evidence immediately following the incident might include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, ventilation, and physical factors such as fatigue, age, and medical conditions.

Procedures for investigating workplace accidents and hazardous substance exposures include:

- Visiting the accident scene as soon as possible.
- Investigate the incident (injury) by gathering facts, interviewing the injured employee and any witnesses; taking pictures and physical measurements of incident site and equipment involved.
- Examining the workplace for factors associated with the accident/exposure
- Determining the cause of the accident/exposure
- Taking corrective action to prevent the accident/exposure from reoccurring
- Recording the findings and corrective actions taken

Manager Responsibilities

- Provide first aid and/or call for emergency medical care if required.
- If further medical treatment is required, arrange to have the injured employee transported to the medical facility.
- Secure area, equipment and other personnel from injury and further damage.
- Contact Safety Coordinator.

Safety Coordinator Responsibilities

- All incidents/accidents will be investigated to level proportionate to the severity of the incident.
- Report the incident to the Host Facility within 24 hours and to Governmental Authorities (CAL-OSHA) within 8 hours if a fatality and 24 hours if a serious injury/hospitalization.
- Complete an accident investigation report form.
- Insure that corrective action to prevent a recurrence is taken.
- Discuss incident, where appropriate, in safety and other employee meetings with the intent to prevent a recurrence.
- If the injury warrants time away from work, ensure that the absence is authorized by a physician and that you maintain contact with the employee while they remain off work.
- Monitor status of employee(s) off work, maintain contact with employee and encourage return to work by providing work tasks within the restrictions imposed by the physician.

HAZARD CORRECTION

Unsafe or unhealthy work conditions, practices or procedures discovered at Pro-Tech Electric job sites shall be corrected in a timely manner based on the severity of the hazards. Hazards shall be corrected according to the following procedures:

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

TRAINING AND INSTRUCTION

All employees of Pro-Tech Electric, including managers and supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction is provided:

- When the IIPP Program is first established
- To all new employees
- To all employees given new job assignments for which training has not been previously provided
- Whenever new substances, processes, procedures, or equipment are introduced to the workplace and represent a new hazard
- Whenever the employer is made aware of a new or previously unrecognized hazard
- To supervisors to familiarize them with the safety and health hazards to which employees under their immediate direction and control may be exposed
- To all employees with respect to hazards specific to each employee's job assignment

General job site safety and health practices include, but are not limited to, the following:

- Implementation and maintenance of the IIPP Program
- Emergency action and fire prevention plan
- Provisions for medical services and first aid including emergency procedures
- Prevention of musculoskeletal disorders, including proper lifting techniques
- Proper housekeeping, such as keeping stairways and aisles clear, work areas neat and orderly, and promptly cleaning up spills
- Prohibiting horseplay, scuffling, or other acts that adversely influence safety
- Proper storage to prevent stacking goods in an unstable manner and storing goods against doors, exits, fire extinguishing equipment, and electrical panels
- Proper reporting of hazards and accidents to supervisors
- Hazard communication, including employee awareness of potential chemical hazards, and proper labeling of containers
- Proper storage and handling of toxic and hazardous substances including prohibiting eating or storing food and beverages in areas where they can become contaminated

RECORDKEEPING

Pro-Tech Electric has taken the following steps to implement and maintain our IIPP Program:

Records of hazard assessment inspections, including the person or persons conducting the inspection, the unsafe conditions and work practices that have been identified, and the action taken to correct the identified unsafe conditions and 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 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 Cal-OSHA.

Inspection records and training documentation will be maintained according to the following checked schedule for one year, except for training records of employees who have worked for less than one year which are provided to the worker upon termination of employment;

SAFETY MEETINGS

Employees of Pro-Tech Electric shall attend and participate in periodic safety meetings. The safety meeting shall be conducted by the Safety Coordinator or the Manager. Safety problems that have arisen or that are anticipated shall be discussed along with any other work site or operations topics. The meeting shall be kept a valuable educational experience by:

- Keeping the meetings moving.
- Starting and stopping on time.
- Using illustrated material and demonstrations to make the point.
- Discussing each topic thoroughly, providing handouts if possible.
- Reviewing accidents, injuries, property losses, and “near misses”.

The meetings must be documented using the appropriate form.

CAL-OSHA INJURY REPORTING AND LOG REVIEW

In the event of a fatality (death on the job) or catastrophe (accident resulting in hospitalization of three or more workers) or serious injury (loss of any body part or hospitalization for 24 hours for anything other than observation) contact the Safety Coordinator, Shane Cutler. The phone numbers to contact Shane Cutler are:

Office: (951) 737-1945 Cell: (951) 858-3673

The Safety Coordinator will in turn report it to the nearest Cal-OSHA Regional District Office, within 8 hours after the occurrence.

Pro-Tech Electric will inform employees of their right to report work-related injuries and illnesses free from retaliation by posting the required OSHA workplace poster. The company will not deter or discourage employees from reporting; and there will be no retaliation against employees for reporting work-related injuries or illnesses.

If an injury or accident should occur, employees are to report the injury to their Manager as soon as possible. A log entry and summary report shall be maintained for every recordable injury and illness. The entry should be done within 7 days after the injury or illness has occurred. The OSHA 300 or equivalent shall be used for the recording.

An OSHA recordable injury or illness is defined as an injury resulting in loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid.

First Aid includes:

- Tetanus shots
- Band-Aids or butterfly bandages
- Cleaning, flushing or soaking wounds
- Ace bandages and wraps
- Non-prescription drugs at non-prescription strength (Aspirin, Tylenol, Etc.)
- Drilling fingernails/toenails
- Eye patches, eye flushing and foreign body removal from eye with Q-tips
- Finger guards
- Hot or cold packs
- Drinking fluids for heat stress

An annual summary of recordable injuries and illnesses must be posted at a conspicuous location in the workplace from February 1st to April 30th. It must contain the following information: Calendar year, company name-establishment name, establishment address, certifying signature, title, and date. If no injury or illness occurred in the year, zeroes must be entered on the total line at the bottom of the form. The annual summary will be signed by a Company Official certifying they have examined the log and found it to be accurate.

The OSHA logs will be evaluated by management to determine trends or patterns in injuries in order to appropriately address hazards and implement prevention strategies.

The OSHA 300 Log, the privacy case list (if one exists), the annual summary, and the OSHA 301 Incident Report forms will be retained for five years following the end of the calendar year that these records cover.

Pro-Tech Electric is aware of and complies with the following OSHA Rule:

Companies with up to 10 employees are not required to maintain OSHA Logs. They are required to report serious injuries as describe above.

Companies with 11 to 19 employees may keep paper records and submit paper records to the Bureau of Labor Statistics upon request.

Companies with 20-249 employees in certain high-risk industries must submit information from their 2016 Form 300A by July 1, 2017, and their 2017 Form 300A by July 1, 2018.

Beginning in 2019 and every year thereafter, the information must be submitted by March 2.

Companies with 250 or more employees in industries covered by the recordkeeping regulation must submit information from their 2016 Form 300A by July 1, 2017. The same employers will be required to submit information from all 2017 forms (300A, 300, and 301) by July 1, 2018.

Beginning in 2019 and every year thereafter, the information must be submitted by March 2.

GENERAL CODE OF SAFE PRACTICES

- All injuries must be immediately reported to your Manager.
- Possession, use, or being under the influence of alcohol or illegal drugs while on company property is strictly prohibited. Violation of this policy is subject to disciplinary action, up to and including termination of employment.
- No employee is expected to undertake a job until that employee has received adequate training.
- All employees shall be trained on the potential hazards that they could be exposed to and how to protect themselves.
- Any employee working more than 6' above the nearest surface shall be protected by an adequate fall protection system.
- No employee shall operate a fork lift truck until they have been safety certified and authorized by the company.
- No employee is required to work under conditions which are unsanitary, dangerous or hazardous to their health.
- Only qualified, trained and authorized personnel are permitted to operate powered machinery or equipment.
- No machine should be operated without the proper machine guarding in place.
- All hand and power tools and similar equipment, whether provided by the employer or the employee, shall be maintained in a safe condition.
- Employees working in areas where there is a possible danger of head injury, excessive noise exposure, or potential eye and face injury shall be protected by Personal Protection Equipment (PPE) provided by the company including, but not limited to: hard hats, safety glasses, hearing protection, high visibility safety vests, fall protection harness with lanyard, and gloves.
- Employees on job sites are subject to the Safety Policies and PPE requirements of General Contractor or Builder.
- Use smart lifting techniques. Lift with your legs. Do not bend at the waist for lifting. If weight is too heavy for you, or it exceeds 50 lbs., get assistance or use material handling equipment.
- In the event of an emergency evacuation, meet at your designated gathering point for a head count. Do not leave the property until released by your Manager.

Ladders and Step Ladders

- Do not use ladders that have loose rungs, cracked or split side rails, missing rubber foot pads, or are otherwise visibly damaged.
- Keep ladder rungs clean and free of grease. Remove buildup of material such as dirt or mud.
- Do not place ladders in a passageway or doorway without posting warning signs or cones that detour pedestrian traffic away from the ladder. Lock the doorway that you are blocking with the ladder and post signs that will detour traffic away from your work.
- Allow only one person on the ladder at a time.
- Face the ladder when climbing up or down it.
- Maintain a three-point contact by keeping both hands and one foot or both feet and one hand on the ladder at all times when climbing up or down the ladder.
- When performing work from a ladder, face the ladder and do not lean backward or sideways from the ladder. Do not jump from ladders or step stools.
- Do not stand on tables, chairs, boxes or other improvised climbing devices to reach high places. Use the ladder or stepstool.
- Do not stand on the top two rungs of any ladder.
- Do not stand on a ladder that wobbles, or that leans to the left or right of center.
- When using a straight or extension ladder, extend the top of the ladder at least 3 feet above the edge of the landing.
- Secure the ladder in place by having another employee hold it if it cannot be tied to the structure.
- Do not move a rolling ladder while someone is on it.
- Do not place ladders on barrels, boxes, loose bricks, pails, concrete blocks or other unstable bases.
- Do not carry items in your hands while climbing up or down a ladder.

Lifting Procedures

- Plan the move before lifting; ensure that you have an unobstructed pathway.
- Test the weight of the load before lifting by pushing the load along its resting surface.
- If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or get assistance from a co-worker.
- If assistance is required to perform a lift, coordinate and communicate your movements with those of your co-worker.
- Position your feet 6 to 12 inches apart with one foot slightly in front of the other.
- Face the load.
- Bend at the knees, not at the back.
- Keep your back straight.
- Get a firm grip on the object using your hands and fingers. Use handles when they are present.
- Hold the object as close to your body as possible.
- While keeping the weight of the load in your legs, stand to an erect position.
- Perform lifting movements smoothly and gradually; do not jerk the load.
- If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
- Set down objects in the same manner as you picked them up, except in reverse.
- Do not lift an object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.
- Never lift anything if your hands are greasy or wet.
- Wear protective gloves when lifting objects that have sharp corners or jagged edges.

Forklift Safety Rules

- The operator must verify trailer chocks, supports, and dock plates are in place prior to loading/unloading trailers.
- Do not exceed the lift capacity of the forklift. Read the lift capacity plate on the forklift if you are unsure.
- Follow the manufacturer's guidelines concerning changes in the lift capacity before adding an attachment to a forklift.
- Lift the load an inch or two to test for stability: If the rear wheels are not in firm contact with the floor, take a lighter load or use a forklift with a higher lift capacity.
- Do not raise or lower a load while you are enroute. Wait until you are in the loading area and have stopped before raising or lowering the load.
- After picking up a load, adjust the forks so that the load is tilted slightly backward for added stability.
- Drive with the load at a ground clearance height of 4-6 inches at the tips and 2 inches at the heels in order to clear most uneven surfaces and debris.
- Drive at a walking pace and apply brakes slowly to stop when driving on slippery surfaces such as icy or wet floors.
- Do not drive over objects in your pathway.
- Do not drive into an area with a ceiling height that is lower than the height of the mast or overhead guard.
- Steer wide when making turns.
- Do not drive up to anyone standing or working in front of a fixed object such as a wall.
- Do not drive along the edge of an unguarded elevated surface such as a loading dock or staging platform.
- Obey all traffic rules and signs.
- Sound horn when approaching blind corners, doorways or aisles to alert other operators and pedestrians.
- Do not exceed a safe working speed of five miles per hour; slow down in congested areas.
- Stay a minimum distance of three truck lengths from other operating mobile equipment.
- Drive in reverse and use a signal person when your vision is blocked by the load.
- Look in the direction that you are driving; proceed when you have a clear path.
- Do not use bare forks as a man-lift platform.
- Do not drive the forklift while people are on the attached man-lift platform.
- Drive loaded forklifts forward up ramps.
- Raise the forks an additional two inches to avoid hitting or scraping the ramp surface as you approach the ramp.
- Drive loaded forklifts in reverse when driving down a ramp.
- Drive unloaded forklifts in reverse when going up a ramp and forward when going down a ramp.
- Do not attempt to turn around on a ramp.
- Do not use "Reverse" to brake.
- Lower the mast completely, turn off the engine and set the parking brake before leaving your forklift.

Aerial Lift Safety Rules

- Inspect lift before operating. If the lift fails the pre-operation inspection, red tag it out and report the problem to your supervisor. Never try to repair the lift yourself.
- Wear appropriate personal protective equipment (i.e. hard hats, goggles, gloves) during operation.
- Maintain safe clearance from electrical lines and apparatus.
- Never exceed the manufacturer's rated platform capacity.
- Do not carry materials on the platform railing unless approved by the manufacturer.
- Do not sit, stand, or climb on the guardrails of an elevated work platform or use planks, ladders, or other devices to gain greater working height.
- When riding in or working from the platform, keep both feet on the platform's floor.
- Cone or section off the work area. Do not allow anyone to work, walk or stand under a raised boom or platform.
- Watch for obstructions when driving the lift or moving the platform. Inspect the work area for dangerous conditions, uneven surfaces, and overhead obstructions such as power lines. Report unsafe conditions to a supervisor before continuing with the task.
- Keep non-operational personnel at least 6 ft away from the machine when driving the lift.
- Never "slam" a control switch or lever through neutral to the opposite direction. Always return switch to neutral and stop; then move switch to the desired position.
- Never use the lift as a crane or use the lift to push or pull another object. Structural damage or tipping may occur.
- Never rest or support the aerial lift's basket on or against any structure.
- Never belt off to adjacent poles, structures, or equipment while working on the aerial lift.
- Before using the lift on an incline, apply the brake systems and if safe to do so, choke the lift's wheels.
- When moving an aerial lift with the boom in the elevated working position and with workers in the basket:
- Ensure that all controls are tested and are operating properly.
- Survey the proposed travel route immediately prior to the work trip and check for overhead obstructions, traffic, holes in ground, ditches, slopes, etc. Complete the survey on foot when the route is unpaved.
- The speed of the lift doesn't exceed three (3) miles per hour.
- Operate lower level controls only after receiving permission from the employee in the basket, except in case of an emergency.
- The elevated employee is wearing a harness attached to the basket or boom.
- Only one employee is in the basket.
- Before moving the lift for travel, inspect the boom(s) or other devices to ensure that they are cradled or stowed in the proper position.
- Secure the lift/remove the key to prevent unauthorized use when the unit is unattended

ELECTRICAL CODE OF SAFE PRACTICES

Personal Protective Equipment

- Do not wear hard hats that are dented or cracked.
- Wear your safety glasses when operating drills and when cutting or snipping copper or light gauge wire.
- Wear your safety goggles when welding or soldering.
- Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
- Wear the dielectric gloves when working on electric current.
- Wear ear plugs or ear muffs in areas posted "Hearing Protection Required."

Electrical Powered Tools

- Do not use power equipment or tools on which you have not been trained.
- Keep power cords away from path of drills and wire soldering and cutting equipment.
- Do not use cords that have splices, exposed wires or cracked or frayed ends.
- Disconnect the tool from the outlet by pulling on the plug, not the cord.
- Turn the tool off before plugging or unplugging it.
- Do not carry plugged in equipment or tools with your finger on the switch.
- Do not leave tools that are "On" unattended.
- Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.
- Turn off the electrical tool and unplug it from the outlet before attempting repairs or service work. Tag the tool "Out of Service."
- Do not use extension cords or other three pronged power cords that have a missing prong.
- Do not remove the ground prong from electrical cords.
- Do not plug multiple electrical cords into a single outlet.
- Do not stand in water or on wet surfaces when operating power hand tools or portable electrical appliances.
- Do not operate a power hand tool or portable appliance while holding a part of the metal casing or while holding the extension cord in your hand. Hold all portable power tools by the plastic hand grips or other nonconductive areas designed for gripping purposes.
- Do not use electrical tools if its housing is cracked.
- Do not use electrical tools while working on a metal ladder unless the ladder has rubber feet.

Machine/Equipment Safety

- Replace the guards before starting machines, or after making adjustments or repairs to the machine.
- Do not remove, alter or bypass any safety guards or devices when operating any piece of equipment or machinery.
- Read and obey safety warnings posted on or near any machinery.

Lockout/Tagout

- Notify all affected employees of the impending lockout situation, the reason for it, and estimated start and duration times.
- Place the breaker or switch in the "Off" or "Safe" position.
- Lockout and tagout all in-line points of control. In most cases, this may be more than one place or more than one lock if several people are working on the equipment.
- Lockout verification:
  Verify that the locked-out switch or control cannot be overridden.
  Test the equipment to be certain that the locked-out switch is de-energized and not simply malfunctioning.
  Press all start buttons to see if the equipment starts.
  Ensure the system you will be working on is the same one that has been locked out.
- All locks and tags are to be left in place until work is completely finished. A lock is never to be removed except by the person who placed it there. Only immediate supervisors are to authorize emergency removal of a lock or tag.
- Before restarting the equipment, verify the following:
  All tools and other items have been removed.
  All machine guards are in place.
  All electric systems are reconnected.
  All employees are clear of equipment.

Portable Welding/Soldering Operations

- Do not perform welding or soldering tasks while wearing wet cotton gloves or wet leather gloves.
- Use the insulated work gloves when using welding or soldering equipment.
- Do not use the welding or soldering apparatus if the power cord is cut, frayed, split or otherwise visibly damaged or modified.
- Do not perform "hot work" such as welding, soldering or other spark producing operations within 50 feet of containers labeled "Flammable" or "Combustible."

Hand Tool Safety

- Use tied off containers to keep tools from falling off of scaffolds and other elevated work platforms.
- Keep the blade of all cutting tools sharp.
- Carry all sharp tools in a sheath or holster.
- Do not use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose.
- Do not use impact tools such as hammers that have mushroomed heads.
- When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
- When using knives, shears or other cutting tools, cut in a direction away from your body.
- Do not carry sharp or pointed hand tools such as screwdrivers in your pocket unless the tool or your pocket is sheathed.

- Do not perform "make-shift" repairs to tools.
- Do not throw tools from one location to another, from one employee to another, from scaffolds or other elevated platforms.
- Do not carry tools in your hand when climbing. Carry tools in tool belts or hoist the tools to the work area with a hand line.
- Transport hand tools only in tool boxes or tool belts. Do not carry tools in your clothing.

Knives/Sharp Instruments

- When handling knife blades and other cutting tools, direct sharp points and edges away from you.
- Cut in the direction away from your body when using knives.
- Store knives in knife blocks or in sheaths after using them.
- Use the knife that has been sharpened; do not use knives that have dull blades.
- Use knives for the operations for which they are made.
- Do not use knives that have broken or loose handles.
- Do not use knives as screwdrivers.
- Do not pick up knives by their blades.
- Carry knives with their tips pointed towards the floor.
- Do not carry knives or other sharp tools in your pockets unless they are first placed in their sheath or holder.

Hot Line Safety

- Clean all protective line equipment after each use, prior to storage.
- Wear rubber gloves or use hot sticks when removing tree branches, limbs, or similar objects from contact with high voltage lines, panels or equipment.
- Do not wear rubber protective gloves while climbing or descending a pole.
- Wear 100% cotton or flame resistant shirts or jumpers (with sleeves rolled down) and protective hats when working on or near live parts, lines, and panels or when climbing poles.
- Wear body belts with straps or lanyards when working at an elevated position (poles, towers, etc.).
- Visually inspect body belts and straps before use for defects, wear, and damage.
- When working with lines of 600 volts or more:
  Wear rubber gloves or use hot sticks when placing protective equipment on/around energized voltage conductors.
  Do not work on the line that is removed from service until the line is cleared, tagged, tested, and grounded.
- Treat bare wire communication conductors on structures as energized lines unless they are protected by insulated conductors.
- Treat bare wire communication conductors on power poles and structures as energized lines (with voltages in excess of 600 volts) unless the conductors are protected by insulating materials.
- Do not remove any ground until all employees are clear of the temporary grounded lines or equipment.
- After a capacitor has been disconnected from its source of supply, wait five minutes before

short-circuiting and grounding it.

- Do not contact the terminals, jumpers or line wires connected directly to capacitors until the capacitors have been short-circuited and/or grounded.
- Visually inspect and wipe down all hot line tools each day before use.
- Do not wear rubber gloves with protectors while using hot line tools.
- Do not use defective hot line tools. Mark them as defective and turn them in for repair or replacement.

Stringing/Removing De-Energized Conductors

- Keep conductors that are being strung in or removed under positive control to prevent accidental contact with energized circuits.
- Do not exceed the load rating for stringing lines, pulling lines, sock connections or load-bearing hardware and accessories.
- Do not use defective pulling lines or defective accessories. Mark the defective items and turn them in for repair or replacement.
- Do not use conductor grips on wire ropes unless the grips are designed for that particular purpose.
- If an existing line that crosses over a conductor is to be deenergized, ground the line on both sides of the crossing or treat the conductor being crossed as energized.

Bus Room Safety

- Do not enter or work in the bus room alone.
- Do not leave the bus room doors open.
- Do not carry any tools or materials above your waist while in the bus room.
- Do not work on any bus, bus structure, cable, or disconnect switch unless it is grounded.

General Electrical Device/Fixture Installation Safety

- Assume all electrical wires as live wires.
- Turn the main switch to "Off" before removing and replacing power fuses.
- Do not wear watches, rings or other metallic objects which could act as conductors of electricity around electrical circuits.
- Before leaving the job, test insulators and equipment to ensure they are free from defects.
- Do not work near any circuit that is in service without first installing barricades approved by your supervisor.
- Do not touch field brushes or a synchronous motor until the motor is up to synchronous speed and the field switch is closed.

Lifting Equipment (chains, cables, ropes, slings, etc.)

- Do not use chain slings if links are cracked, twisted, stretched or bent.
- Fabricate all wire in wire rope slings by using thimbles; do not form eyes by using wire clips or knots.
- Do not shorten slings by using make-shift devices such as knots or bolts.
- Do not use a kinked chain.
- Protect slings from the sharp edges of their loads by placing pads over the sharp edges of the items that have been loaded.
- Do not place your hands between the sling and its load when the sling is being tightened around the load.
- Do not alter or remove the safety latch on hooks. Do not use a hook that does not have a safety latch, or if the safety latch is bent.
- Lift the load from the center of hooks, not from the point.

Access and Egress Safety

- Use ladders, structural ramps or stairways as a means of access or egress from excavations or restricted spaces.
- Do not climb a ladder unless it extends at least three (3) feet or three (3) rungs beyond the edge of the trench.

Driving/Vehicle Safety

- Turn the vehicle off before fueling it.
- Do not smoke while fueling a vehicle.
- Wash hands with soap and water if you spill gasoline on your hands.
- Shut your door and fasten your seat belt before moving the vehicle.
- Obey all traffic laws and signals at all times.
- Maintain a three-point contact using both hands and one foot or both feet and one hand when climbing into and out of vehicles.

Handling Chemicals

- Follow the instructions on the label and in the corresponding Safety Data Sheet (SDS) for each chemical product you will be using in your workplace.
- Do not use protective clothing or equipment that has split seams, pin holes, cuts, tears, or other visible signs of damage.
- Each time you use your gloves, wash them before removing the gloves, using cold tap water and normal hand washing motion. Always wash your hands after removing the gloves.
- Do not use chemicals from unlabeled containers and unmarked cylinders.
- Do not drag containers labeled "Flammable."
- Do not store chemical containers labeled "Oxidizer" with containers labeled "Corrosive" or "Caustic."
- Do not smoke while handling chemicals labeled "Flammable."

- Do not store chemicals labeled "Flammable" near sources of ignition such as portable heaters.
- Do not handle or load any containers of chemicals if their containers are cracked or leaking.

Compressed Gas Cylinders

- Do not handle oxygen cylinders if your gloves are greasy or oily.
- Store all compressed gas cylinders in the upright position.
- Place valve protection caps on compressed gas cylinders that are in storage or are not being used.
- Do not lift compressed gas cylinders by the valve protection cap.
- Do not store compressed gas cylinders in areas where they can come in contact with chemicals labeled "Corrosive."
- Hoist compressed gas cylinders on the cradle, slingboard, pallet or compressed gas cylinder basket.
- Do not place compressed gas cylinders against electrical panels or live electrical cords where the cylinder can become part of the circuit.

EXCAVATION CODE OF SAFE PRACTICES

- Do not start work until barricades, barrier logs, fill or other protection have been installed to isolate the work area from local traffic.
- Ensure that flaggers are properly trained and authorized.
- Reflective warning vests must be worn by traffic flagmen who are assigned to controlling traffic.
- Do not walk under platforms that bridge a trench.
- Do not enter a trench unless you have been given permission by the competent person. Seek out and identify the designated "Competent person" for the excavation site.
- Assign a competent signal person to direct trucks. This is a full time job. Keep the signal person free of other duties and stationed in a clearly defined area.
- Instruct truck drivers to back up only when signaled to do so.
- Provide an audible horn and a backup alarm on all equipment.
- Guard all exposed gears, chains, rolls, shafts and pinch points.
- Stop machinery before repairing it.
- Be careful during fueling.
- Use a 3-point stance when mounting and dismounting equipment. Three of your four extremities should be in contact with a solid surface at all times. Do not jump onto or from equipment.

Access and Egress Safety

- Use ladders, structural ramps, or stairways as a means of access or egress from excavations. Do not use scrap lumber, excavation machinery, or other improvised devices for climbing.
- Do not climb a ladder unless it extends at least three (3) feet or three (3) rungs beyond the edge of the trench.

Crane Safety

- Do not use load hooks that are cracked, bent or broken.
- Do not use cranes that do not have their rated load capacity indicated on each side of the crane or on its load block.
- Passengers are not permitted to ride inside the operator's cab of a truck crane.
- Do not exceed the rated load capacity as specified by the manufacturer.
- Do not operate a crane on soft ground without using cribbing and mats.
- Fully extend outriggers before attempting a lift.
- Stay outside the barricades of the posted swing radius.
- Do not perform any crane refits or modifications without the manufacturer's approval.
- Do not leave the crane unattended with a hoisted load.
- Do not hoist loads over people.
- Do not drive on the road shoulders.
- Wear a high visibility vest when working as a signalman.
- Only follow the signals of the person designated to give you signals when operating a crane.

- Replace the belts, gears or rotating shaft guards after servicing a crane; do not use the crane if guards are missing from these areas.

Backhoe/Power Shovel Operations

- Do not operate backhoes, power shovels and other heavy equipment within two (2) feet from the edge of the excavation.
- Do not use a bucket or other attachments for a staging or temporary platform for workers.
- Stay in the compartment during operation of the backhoe or power shovel. Do not reach in or attempt to operate controls from outside the backhoe or power shovel.

Trenchbox Safety

- Do not enter a trenchbox during its installation or removal.
- Do not enter a trenchbox that is being moved.

Personal Protective Equipment

- Do not paint or drill holes in your hard hat.
- Do not wear hard hats that are dented or cracked.
- Wear safety glasses, goggles or face shields when operating chippers, grinders, lathes or sanders.
- Wear face shields over goggles or safety glasses during open furnace, hot dipping, metal plating or gas cutting operations.
- Wear chemical goggles when using, applying or handling chemical liquids or powders from containers labeled "CAUSTIC" or "CORROSIVE".
- Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
- Wear a welding helmet or welding goggles during welding operations.
- Wear dielectric gloves when working on electric current.
- Wear ear plugs or ear muffs in areas posted "Hearing Protection Required".

AERIAL LIFT SAFETY POLICY

Aerial platform lifts are used and operated by employees of Pro-Tech Electric. The company recognizes that there are a number of potential hazards associated with the use of these aerial platform lifts. This policy is based on the ANSI/SIA A92.6-1999 Standard and is designed to ensure that these lifts are operated in a consistent and safe manner through a system of safety checks and accountability.

This policy applies to all Company-owned equipment designed to elevate personnel on a platform that is propelled by a powered lifting device, with the controls located on the platform itself. Aerial platform lifts include one-man lifts, scissor lifts, boom trucks, cherry pickers, etc.

Maintenance, Inspection and Repair

Maintenance: The company shall arrange for maintenance that is appropriate for their lift. The company shall establish a preventive maintenance program based on the manufacturer's recommendations, the environment it is to be used in and the frequency at which it is to be used.

Inspection: The company shall ensure that pre-start inspections, frequent inspections and annual inspections are being performed on the lift.

Repair: When safety related items have been discovered, the lift shall be placed out of service until the item(s) has been repaired. All replacement parts or components that are replaced shall be identical to or equivalent to the original parts based on information provided by the manufacturer or supplier.

Training

The company is responsible for arranging for the training of all authorized Operators of the lift. No personnel shall operate or ride on an aerial platform lift if they have not been trained. The company shall ensure that aerial platform lift maintenance is performed only by personnel who are trained in aerial lift maintenance.

Records Retention

Serial number and date of purchase (this shall be kept for as long as the company owns the lift).

Written records of the frequent and annual inspections and repairs performed. This shall include deficiencies found, corrective actions taken and the identification of the person(s) who performed the inspection and repairs.

Written records of repairs made on the lift.

Training records for any employees trained in the maintenance of the aerial platform lift.

Employee Responsibilities

Because the employee has direct control over the application and operation of aerial platform lifts, conformance with good safety practices in this area is the responsibility of the user and the operating personnel. Decisions on the use and operation of the lift shall be made with the understanding that the platform will be carrying personnel whose safety is dependent on those decisions. Operators of aerial platform lifts have responsibilities involving the following:

Manuals

Operators of aerial platform lifts must review, and acknowledge that they have reviewed, the operating manuals for all lifts that they use. Documentation of this shall be established by having the employee review and sign the form titled "Operating Manual Acknowledgement Form (Appendix A). The user is expected to know and understand the following about the lift he/she operates prior to initial operation of the lift:

- The operation of the lift.
- All control features of the lift.
- All placard warnings.
- All safety devices on the lift.
- Where to locate the user manual.
- Who can operate or use the platform lift.

If the user does not understand any of the above, he/she shall consult with his/her supervisor prior to using the lift.

Inspection and Maintenance

Operators shall inspect and maintain the aerial platform as required by the company to ensure proper operation. Note that some employees may be approved by the company to operate, but not to perform maintenance on the lifts. However, all Operators shall perform pre-start inspections on the lift prior to each day's use of the lift. Documentation of the pre-start inspections shall be done by completing an "Aerial Platform Lift Pre-Start Inspection Form" (Appendix C). Aerial platform lifts that are not in proper operating condition shall be immediately removed from service and reported to the appropriate company supervisor. Only employees who are authorized by the company may perform maintenance duties on the lifts.

Training

Only trained employees may operate or use aerial platform lifts. Likewise, only trained and authorized employees may perform maintenance duties on the lifts.

Training Program

All operators of aerial platform lifts shall attend an aerial lift training session provided by the Company. The contents of the training will include the following:

- Purpose and use of manuals.
- Pre-start inspection process.
- Identification of malfunctions and problems.
- Factors affecting stability.
- Purpose of placards and decals.
- Workplace inspections.
- Safety rules and regulations.
- Authorization to operate.
- Operator warnings and instructions.
- Operation of the aerial platform.
- Demonstrate competency.

Inspection Types

The inspection process is a critical step in preventing aerial lift accidents that are caused from faulty or worn out equipment. Aerial platform lifts that are not in proper operating condition shall be removed from service until the problems have been corrected by an authorized and trained maintenance technician.

Pre-Start Inspections

Before each day's use or at the beginning of each shift that the aerial platform lift is used it shall be given a pre-start inspection which is a visual inspection and functional test that includes the following criteria:

- Operating and emergency controls.
- Safety devices.
- Personal protective devices.
- Air, hydraulic and fuel system leaks.
- Cables and wiring harness.
- Loose or missing parts.
- Tires and wheels.
- Placards, warnings, control markings and operating manual(s).
- Outriggers, stabilizers and other structures.
- Guardrail system.
- Other items specified by manufacturer.

Frequent Inspections

Any time an aerial platform lift has not been used for a period of 3 months or more, a frequent inspection shall be performed by a qualified person and shall include the following:

- All functions and their controls for speed(s) smoothness, and limits of motion.
- Lower controls including the provisions for overriding of upper controls.
- All chain and cable mechanisms for adjustment, wear or damaged parts.
- All emergency and safety devices.
- Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant as specified by the manufacturer.
- Visual inspection of structural components and other critical components such as fasteners, pins, shafts and locking devices.
- Placard, warnings and control markings.
- Additional items specified by the manufacturer.

Annual Inspections

An annual inspection shall be performed on each aerial platform lift each year. The inspection shall be performed by a qualified mechanic who is authorized to perform maintenance duties on the lift. The inspection shall include all items specified by the manufacturer for an annual inspection.

Workplace Inspections

Before an aerial platform lift is used and during it's use, the operator shall check the area in which the aerial platform lift is to be used for possible hazards such as, but not limited to:

- Drop-offs or holes.
- Slopes.
- Bumps and floor obstructions.
- Debris.
- Overhead obstructions and high voltage conductors.
- Hazardous locations and atmospheres.
- Inadequate surface and support to withstand all load forces imposed by the aerial platform lift.
- Wind and weather conditions.
- Presence of unauthorized people.
- Other possible unsafe conditions.

Standard Procedures

To ensure safe practices, this general procedure is used when an authorized employee uses an aerial platform lift:

- Obtain any necessary authorization to use the lift.
- Check the last pre-start inspection for any comments or notes.
- Perform a pre-start inspection on the lift, document the inspection and place it in the reserved storage location on the lift.
- Perform a workplace inspection in the area that the lift will be used.
- Extend and adjust the outriggers, stabilizers, extendible axles, or other stability enhancing means.
- Ensure that the guardrails are installed and are in place.
- Ensure that the load being placed on the lift is within the rated capacity of the lift.
- Test the controls of the lift.
- Ensure that all personnel on the lift have been trained and authorized to operate or work on the platform.

Platform Qualifications

The following criteria shall be met to be an approved platform on a lift:

- Platform width shall be not less than 18 inches and shall have a slip resistant surface.
- The platform shall have a guardrail system around its periphery. It is removable or can be lowered. The means used to secure it in the normal operating position shall be readily accessible for inspection and maintenance.
- The guardrail system shall include a top rail that is between 39 and 45 inches high, a mid rail that is approximately half-way from the platform to the top rail, and a toe board that is at least 4 inches high.

When to use personal fall protection

When operating articulating, or boom type lifts that are equipped with lanyard tie off points, the use of fall protection equipment is required. If special circumstances exist that encourage the operator to use fall protection on vertical aerial platform lifts, they must tie off to a proper tie off point that is not attached to or part of the aerial platform lift itself.

Markings and Decals

In addition to any other markings or decals that are placed on the lift by the manufacturer, the following information shall be displayed on all aerial platform lifts in a clearly visible, accessible area and in a durable manner:

- The make, model, serial number, and manufacturer's name and address.
- The rated workload, including rated number of occupants.
- The maximum platform height.

Appendix A

Operating Manual Acknowledgement Form

By signing this document, I am certifying that I have received a copy of the operations manual for the aerial platform lift shown below. Upon training and authorization by Pro-Tech Electric, I am expected to operate this lift. I understand that it is my responsibility to review and understand the safe operation of this aerial platform lift based on the training I receive and the manufacturer's recommendations. I understand that if, at any time, I have any questions regarding the information found in the user's manual I can contact Shane Cutler or my Manager to obtain my answers.

Aerial Lift Make_____

Aerial Lift Model _____

Operator's Name (print) _____

Operator's name (sign) _____

Date _____

Appendix B

Aerial Platform Lift Pre-Start Inspection form

The pre-start inspection shall be performed prior to each day's or shift's use of the aerial platform lift by an authorized and trained user of the lift. Documentation of the inspection shall be maintained by the company, with a copy of the most recent inspection document stored on the lift.

Check off the items that have been inspected or mark the N/A box if the item does not apply to the lift being inspected. Place any comments in the space provided below. If there are any of these items that are not satisfactory place the lift out of service until the item is corrected.

Make of lift: _____ Model of lift: _____ Serial #: _____

Inspector's Name _____ Date of Inspection _____

Item Inspected	Okay	Not Okay	N/A
Operating controls	☐	☐	☐
Emergency controls	☐	☐	☐
Safety devices	☐	☐	☐
Personal protective devices	☐	☐	☐
Pneumatic system (leaks)	☐	☐	☐
Hydraulic system (leaks)	☐	☐	☐
Fuel system (leaks)	☐	☐	☐
Cables	☐	☐	☐
Wiring harness	☐	☐	☐
Loose/missing parts (locking pins/bolts…)	☐	☐	☐
Tires and wheels	☐	☐	☐
Placards and Warnings	☐	☐	☐
Operational Manual	☐	☐	☐
Outriggers/Stabilizers	☐	☐	☐
Guardrail system and locking gate	☐	☐	☐
Other items	☐	☐	☐

Comments: _____

_____ _____

_____ _____

_____

Inspector's Signature _____ Date _____

ASSURED EQUIPMENT GROUNDING POLICY

Ground-Fault Circuit Interrupters

All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters for personnel protection.

Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5kV, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with ground-fault circuit interrupters.

Assured Equipment Grounding Conductor Program

Pro-Tech Electric shall establish and implement an assured equipment grounding conductor program on construction sites covering all cord sets, receptacles which are not a part of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. Our assured equipment grounding conductor program complies with the following minimum requirements:

A written description of the program. The description and procedures shall be available at the jobsite for inspection and copying by CAL-OSHA and any affected employee.

Pro-Tech Electric will designate one or more competent persons to implement the program.

Each cord set , attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage. Equipment found damaged or defective shall not be used until repaired.

The following tests shall be performed on all cord set, receptacles which are not a part of the permanent wiring of the building or structure, and cord-and plug-connected equipment required to be grounded.

- All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.
- Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.

All required tests shall be performed:

- Before first use.
- Before equipment is returned to service following any repairs.

- Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over).
- At intervals not to exceed 3 months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.

Pro-Tech Electric shall not make available or permit the use by employees of any equipment which has not met these four requirements.

Tests performed as required in the preceding paragraph shall be recorded. This test record shall identify each receptacle, cord set, and cord- and plug-connected equipment that passed the test and shall indicate the last date it was tested or the 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. The record shall be made available on the jobsite for inspection by CAL-OSHA and any affected employee.

One of the methods listed by CAL-OSHA as part of acceptable record keeping is to establish a color code for marking cord sets and cord- and plug-connected equipment. The table below lists a color code that is in wide use by electricians and contractors. Colored plastic or vinyl electrical tape is placed on one or both ends of cords and cord- and plug-connected equipment to denote the month that the tests were performed.

Assured Equipment Grounding Conductor Program Color Code			
Month #	**Month Tested**	**Color of tape(s) to apply to cord**	
1	**January**	**White**	
2	**February**	**White +**	**Yellow**
3	**March**	**White +**	**Blue**
4	**April**	**Green**	
5	**May**	**Green +**	**Yellow**
6	**June**	**Green +**	**Blue**
7	**July**	**Red**	
8	**August**	**Red +**	**Yellow**
9	**September**	**Red +**	**Blue**
10	**October**	**Orange**	
11	**November**	**Orange +**	**Yellow**
12	**December**	**Orange +**	**Blue**

As an easy reminder of the color of the tape to place on the newly tested cord, remember the *color for the start of each calendar quarter by the season:*

White in January for Winter
Green in April for Spring
Red in July for Summer, or the 4th of July
Orange in October for Fall, or pumpkins.

Then add: Yellow for the second month in each quarter; Blue for the third month of each quarter.

DRIVING SAFETY POLICY

Pro-Tech Electric recognizes that Driving Safety is an important part of our operation. Getting personnel and materials to job sites is necessary to getting the job done. However, this operation has risks; and exposures to traffic accidents are a serious part of company safety policies and procedures. To reduce the exposure of injury, and even possible fatalities, to company personnel from traffic accidents, the company has instituted the following guidelines:

- Only authorized employees will drive company vehicles.
- All drivers will carry in their possession a current and valid driver's license.
- The driver and all passengers must wear seat belts at all times.
- Do not initiate or answer cell phone calls while driving. If you must make or take a call, pull over and stop the vehicle. No texting while driving.
- Possession or consumption of alcoholic beverages while in a company vehicle will result in termination of employment.
- Exercise defensive driving practices; follow speed laws, be courteous and maintain a safe distance from the vehicle in front of you.
- Use only vehicles that are the correct size and designed for the intended use.
- Vehicles shall be maintained in safe working order. Report any mechanical defects to your Manager.
- Drivers must report any accidents or traffic violations to their Manager immediately.
- Loads on company pickups and trucks shall be secured and within the manufacturers maximum weight limit.
- In the event of an accident, take the following actions:
    - Call 911 and report the accident and any injuries that have occurred.
    - Call the office and report the accident to company management.
    - Do not admit liability to anyone.
    - Cooperate with investigating law enforcement personnel.
    - Use the accident reporting kit in the glove compartment to document the facts as you know them.

DRUG & ALCOHOL POLICY

Pro-Tech Electric is a Drug and Alcohol Free Workplace. Any violation of our drug and alcohol policies will result in disciplinary action, up to and including termination of employment.

- Drug and alcohol testing will be conducted pre-employment for all applicants.
- Employees will be tested at random for drug and alcohol use. Random testing will be set up in a fair and unbiased manner.
- If a company official or competent person has determined there is reasonable cause or suspicion that an individual is performing work under the influence, then that individual will be required to submit to a drug and alcohol test
- Possession of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Use of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Being under the influence of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Any employee suffering a work related injury will be tested for drugs and alcohol immediately after the accident.
- Any employee that receives unacceptable drug and alcohol test results will not be allowed to work on a job site or in a company facility.

ELECTRICAL SAFETY AWARENESS POLICY

Pro-Tech Electric has developed and implemented this safety procedure for safely working around electrical hazards. It includes provisions for training, lockout requirements, and specific types of work practices and the required precautionary practices when using portable electric equipment.

It is the responsibility of each exposed employee's immediate supervisor to ensure that the employee has received the training necessary to safely perform his or her duties. This training will be given via classroom and on-the-job instruction and is to be documented. Exposed employees shall be trained in and familiar with the safety related work practices as they pertain to their respective job assignments. Additional training requirements for qualified persons is provided

Employees will be trained in specific hazards associated with their potential exposure. This training will include isolation of energy, hazard identification, premises wiring, connection to supply, generation, transmission, distribution installations, clearance distances, use of personal protective equipment and insulated tools, and emergency procedures.

Qualified Person Those persons who are permitted to work on or near exposed energized parts and are trained in the applicable electrical safe work practices.

Qualified persons shall, at a minimum, be trained in and familiar with:

- The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
- The skills and techniques necessary to determine the nominal voltage of exposed live parts.
- The clearance distances specified in Table I and the corresponding voltage to which the qualified person will be exposed.
- All electrical energy sources must be locked out when any employee is exposed to direct or indirect contact with parts of fixed electrical equipment or circuits.
- Safety related work practices will be used to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts. Safety related work practices will be consistent with the nature and extent of the associated electrical hazards.

Specific types of work practices covered by this safety procedure include:

- Working with de-energized parts
- Working with energized parts
- Vehicular and mechanical equipment near overhead lines and underground lines
- Illumination
- Conductive materials and equipment
- Portable Ladders
- Housekeeping

Portable Equipment

All portable electric equipment will be handled in such a manner that will not damage or reduce service life. Flexible cords connected to equipment may not be used for raising or lowering equipment and will not be used if damage to the outer insulation is present. Additionally, visual inspections are required and unauthorized alterations of the grounding protection are not allowed to ensure the safety of employees. Prior to each shift, a visual inspection will be performed for external defects and for possible internal damage. Attachment plugs and receptacles may not be connected or altered in a manner that would prevent proper continuity of the equipment grounding conductor. In addition, these devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors.

Portable electric equipment and flexible cords used in highly conductive work locations or in job locations where employees are likely to contact water or conductive liquids shall be approved by the manufacturer for those locations. The hazardous locations that employees should be aware of include, wet locations and locations where combustible or flammable atmospheres are present.

For wet locations, employees' hands will not be wet when plugging and unplugging energized equipment. Energized plug and receptacle connections will be handled only with protective equipment if the condition could provide a conductive path to the employee's hand (if, for example, a cord connector is wet from being immersed in water). In addition, ground-fault circuit interrupter (GFCI) protection is required for some equipment/locations and is also recommended for use in all wet or highly conductive locations.

For combustible/flammable atmospheres, all electric equipment and wiring systems in classified locations must meet The National Electric Code requirements for that particular classification.

Protective Equipment

Employees working in confined areas such as electrical vaults or any other area where there are potential electrical hazards will be provided with and use protective equipment that is appropriate for the work to be performed.

Examples of Personal Protective Equipment (PPE) that might be needed for protection against electric shock include but are not limited to:

- Nonconductive hard-hats, gloves, and foot protection or insulating mats
- Eye and face protection whenever there is danger from electric arcs or flashes
- Insulated tools or handling equipment
- Protective shields and barriers to protect against electrical shock and burns

Additionally, other ways of protecting employees from the hazards of electrical shock will be implemented, including insulation and guarding of live parts. The insulation must be appropriate for the voltage and the insulating material must be undamaged, clean, and dry. Guarding prevents the employee from coming too close to energized parts. It can be in the form of a physical barricade or it can be provided by installing the live parts out of reach from the working surface.

Conductive Materials and Equipment

Conductive materials and equipment (e.g., hand tools) will be handled to prevent contact with exposed energized conductors or circuit parts. Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) will not be worn.

De-energized Parts

All electrical parts exceeding 50 volts will be de-energized before an employee works on or near equipment unless:

- The de-energizing creates a more hazardous situation
- The equipment, by design, cannot be shut down
- The decision to work without de-energizing shall be made by management and documented before work begins
- When any employee is exposed to direct or indirect contact with parts of fixed electrical equipment or circuits that have been de-energized, the electrical energy source will be locked out.
-

Energized Parts

If work must be performed while equipment is energized or if de-energizing is not feasible, additional safety measures will be taken to ensure the safety of the qualified employee and any other persons who may be exposed. Protection from energized parts will be suitable for the type of hazard involved. Exposed energized parts in areas accessible to the public shall be continuously protected by an authorized attendant. In areas not accessible to the public, employees shall be protected from exposed energized parts by the use of signs or tags. In addition to signs or tags, barricades shall be used where necessary to limit access to areas with exposed energized parts. Conductors and parts of electrical equipment that have been deenergized, but not been locked or tagged out, shall be treated as live parts.

Only Qualified persons will be allowed to perform work directly on energized parts or equipment. Qualified persons will be capable of working safely on energized circuits and will be familiar with special precautionary techniques, personal protective equipment, insulating and shielding materials and insulated tools. Qualified persons must also have received the training required in this safety procedure.

Illumination

Employees will be provided with adequate light to work on energized equipment or equipment will be relocated to ensure adequate light is available.

Portable Ladders

Portable ladders will have nonconductive surfaces if they are used where the employee or the ladder could be exposed to electrical shock hazards.

Reclosing Circuits

If circuits are tripped using a protective device such as ground fault circuit interrupter (GFCI), power will not be restored until the reason for the interruption is determined and corrected. Fuses or breakers will not be replaced or reset until it is determined that the circuit is safe to operate. Fuses will not be replaced with higher rated fuses or with makeshift devices to bypass circuit protection as designed. Problems will be identified and promptly repaired by a qualified person.

Vehicular and Mechanical Equipment Near Overhead Power Lines

Overhead power lines will be de-energized and grounded before any work is performed by any vehicle or mechanical equipment near the energized overhead power lines. If the overhead lines cannot be de-energized, then the vehicle or mechanical equipment will be operated so that a clearance of 10 feet is maintained. If the voltage of the overhead line exceeds 50 kV, the distance will be increased 4 inches for every 10 kV increase in power. If lines are protected with properly rated insulating devices, the distance may be decreased. If the equipment is an aerial lift insulated for the voltage involved and if the work is performed by a qualified person, the clearance may be reduced to a distance given in Table I. If protective measures such as guarding or isolation are provided, these measures must protect the employee from contacting such lines directly with any part of the body or indirectly through conductive materials, tools, or equipment.

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 he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:

- For voltages to ground 50kV or below - 10 feet (305 cm)
- For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.

Electrical Equipment/Machinery

All electrical equipment and machinery must be grounded effectively so that there is no potential difference between the metal enclosures. Use the voltage detector to find discrepancies and other test equipment to determine the corrective action required. Disconnects should be easily identified with the specific machinery they shut off. Disconnects should also be accessible near the machinery for use in an emergency. The disconnects should be activated periodically to be sure they are operable. All electrical connections to the equipment must be secure so that no cord or cable tension will be transmitted to the electrical terminals within the equipment. The wiring installation should be such that it is protected from damage at all times.

GFCI Protection

Generally, GFCI protection is not required by the NEC on a retroactive basis. Where there is an employee exposure to potential line-to-ground shock hazards, GFCI protection should be provided. This is especially important in work areas where portable electrical equipment is being used in wet or damp areas in contact with earth or grounded conductive surfaces.

Temporary wiring that is being used on a permanent basis should be replaced with fixed wiring. Conduit and/or cable systems must be protected from damage by vehicles or other mobile equipment. All fittings and connections to junction boxes and other equipment must be secure. No exposed wiring can be allowed. Check for missing knockouts and cover plates. Jerry-rigged splices on flexible cords and cables should be correctly repaired. Electrical equipment should be installed in a neat and professional manner. Check for damaged insulation on flexible cords and pendant drop cords.

Table I: Approach Distance for Qualified Employees

Alternating Current

300V and less	Avoid Contact
Over 300V, but less than 750V	1 ft. 0 in. (30.5 cm)
Over 750V, but less than 2kV	1 ft. 6 in. (46 cm)
Over 2kV, but less than 15kV	2 ft. 0 in. (61 cm)
Over 15kV, but less than 37kV	3 ft. 0 in. (91 cm)
Over 37kV, but less than 87.5kV	3 ft. 6 in. (107 cm)
Over 87.5kV, but less than 121kV	4 ft. 0 in. (122 cm)
Over 121kV, but less than 140kV	4 ft. 6 in. (137 cm)

EMERGENCY ACTION PLAN

Pro-Tech Electric has developed the following Emergency Action Plan (EAP), in compliance with Title 8 of the California Code of Regulations; General Industry, and Construction Safety orders.

The EAP has been designed to address, in detail, the following areas:

- Program Implementation and Responsible Person
- Superintendents and Manager Responsibilities
- Emergency Posting Notice
- First Aid / Emergency Medical Services
- Alarm System
- Designated Employees – Training Procedures
- Employee Notification and Training
- Emergency Escape and Evacuation Procedures
- Multi-Employer Job Site Exposures
- Crisis Response Procedures

Shane Cutler is responsible for overseeing the implementation and maintenance of the EAP. Full authority is granted to the appropriate individuals to properly manage and enforce all provisions of this policy.

The Manager is responsible for maintaining compliance with the Emergency Action Plan, and establishing procedures that are job site specific. A copy of this program is provided to each Manager for his or her reference.

At specific job sites, the Manager is responsible for the following functions:

- Identifying and documenting appropriate evacuation routes and safe location for employees to assemble
- Designating employee(s) to assist with Crisis Response and Emergency Evacuation procedures
- Providing notification and training to employees
- Coordinating continued enforcement of the EAP with Safety Committee members
- Monitoring inventory of First Aid Kit contents at job sites

A posting notice will be displayed at all job sites, which will identify the following:

- Identity of the Site Manager and After Hours Contact Information
- Name, address and directions to job site
- Fire & Rescue, Police and Ambulance – Dial 911
- Nearest Hospital – Phone Number
- Nearest Cal/OSHA Office – Phone Number
- Map of job site that identifies the location of the area to assemble in the event of an emergency requiring evacuation

Outside services will be the primary source of Emergency Medical Treatment (i.e., ambulance, medics, and fire department).

First Aid Kits will be maintained and accessible at all job sites. Contents of the First Aid Kit will adhere to requirements consistent with the number of employees working at the job site, and will be kept in a weatherproof container.

The lead employee will be responsible for performing weekly inventory checks to make sure used contents are replaced.

The Manager will ensure that a suitable number of employees are certified to provide First Aid / CPR. This training will be coordinated with Shane Cutler.

Only certified employees will be allowed to perform First Aid / CPR. Action taken will only be to the extent deemed necessary to preserve life.

In the event of an emergency requiring evacuation of all employees, several warning systems may be utilized, depending on the work site conditions or emergency involved, including:

- Verbal Communication
- Vehicle Horn
- Air Horns

The Manager will be responsible for sounding the alarm and locating any hearing- impaired employees to ensure proper evacuation.

Lead employees will be responsible for the job site coordination of the EAP and assignment of tasks to designated employee(s) that will assist with emergency procedures.

Designated employees will be provided with the proper training to assist with the following functions:

- First Aid / Emergency Medical Services
- Fire Suppression
- Crisis Response Procedures
- Evacuation Procedures

No employee will be permitted to perform any action that might endanger his/her life or the life of others.

All employees, permanent and intermittent, will be provided necessary training on all elements of the EAP. Employee notification and training will occur when:

- Work begins at a new job site
- A new hire is assigned to a specific job site
- An employee is transferred to a new job site

Training will be documented in accordance with the company IIPP. Emergency Posting Notices will be displayed at all job sites

Employee notification and training relevant to the EAP will consist of:

- Employees right to review the EAP policy
- Location of Emergency Posting Notice (Safety Bulletin Board)
- Procedures implemented for Crisis Response
- Identity of the Alarm System (sound) that will be used to trigger an evacuation
- Location of exit routes and designated location for employee to assemble
- First Aid and Emergency Medical Services available to employees

When an evacuation occurs:

- Employees must proceed directly to the designated assembly area

- Employees are not to stop and pick up personal belongings when exiting the job site/structure
- Employees are not to block areas that would be considered access for emergency vehicles
- Employees will not be allowed to re-enter the job site without a clear indication that it is safe
- Employees cannot leave the assembly area without permission of the Manager.
- Employees will be instructed not to respond to news media. Contact with the media is limited to designated Supervisors or Management

The most important focus of an emergency is the protection of human life.

The Manager will be responsible for evaluating new job sites in order to identify emergency evacuation routes and a safe location for employees to assemble. This information will be documented and posted on the safety bulletin board.

Identified exit routes will be checked periodically to ensure they remain unobstructed. The following tasks will be carried out in the event of an emergency requiring evacuation:

- The Manager, or designated employee will sound the evacuation alarm
- The Manager will instruct a designated employee to contact the necessary emergency facilities and Management, and proceed to the identified assembly area to perform the necessary head-count
- The Manager and designated employee(s) will be responsible for making sure the job site / structure is clear of all employees that have not been assigned with specific duties to assist with the evacuation

Other contractors/employers that have a contractual obligation to Pro-Tech Electric are required by contract to be in compliance with Cal-OSHA regulations. Every attempt will be made to ensure that all exposed employees are evacuated in the event of an emergency.

Crisis Response Procedures

Fire and Explosion

- All employees will be trained on how to properly use fire suppression equipment
- All employees will be instructed on the

  following:

  - Any employee discovering a fire should quickly and carefully remove any person who is injured or in immediate danger, unless doing so will create the possibility of personal injury
  - Employees in the immediate vicinity of the fire, as well as those in nearby areas who may be threatened by the fire, must be notified of the existence of the fire
  - Only properly trained and authorized employees may attempt to extinguish a small fire, which does not involve electrical components or hazardous substance.
  - If the fire appears to be too large, involves toxic substances, or is electrical based, all employees are to leave the area immediately and notify management

When the fire cannot be extinguished using a portable fire extinguisher:

- The Manager will initiate the evacuation procedures
- The fire will be reported to the appropriate agency(s)
- The emergency evacuation alarm will be sounded
- Without creating exposure to personal injury, attempts should be made to contain the fire, by properly trained and designated employees only (i.e. closing doors and windows near the fire and removing any flammable materials)

Earthquake

All employees will be instructed to:

- Move away from windows, temporary walls, partitions, freestanding and heavy objects
- Duck or drop down to the ground
- Attempt to take cover under fixed objects, or interior framing, that may provide safety from falling objects
- Avoid being near any electrical units, flammable or combustible materials
- STAY PUT until the ground / structure stops shaking and it is safe to move

Natural Disasters Including, but not limited to, Floods, Tornadoes, and Severe Thunderstorms

- Most natural disasters are usually forecast sufficiently in advance for emergency action to be initiated before the exposure becomes serious.
- In most cases, advising employees of the approaching danger and seeing to it that they are in a safe location will be sufficient, should the incident occur during normal working hours.

Chemical Leak, Spill or Threatened Release

The following procedures will be carried out in the event of a hazardous substance spill: All employees will be instructed to:

- Notify the Manager immediately
- All employees, not trained to deal with the exposure, will be instructed to leave the immediate area

The Manager will:

- Determine the nature and source of the spill/release. SDSs will be used to determine the characteristics of the material and identify necessary precautions for dealing with the material
- Depending on the classification and amount of the spill, if warranted, the local fire department and appropriate local environmental agency will be notified
- Clean-up procedures will be performed by qualified personnel

Bomb Threat

If a bomb threat is received, the following procedures will be carried out: All employees will be instructed to notify the Manager immediately.

The Manager and/or designated employee(s) will:

- Notify the Police and Fire Department
- The emergency evacuation procedure will be initiated, unless the threat includes instructions not to do so (proper law/emergency enforcement agencies should determine proper course of action in this situation)
- The individual who received the threat should be instructed to document every word of the conversation immediately, if applicable
- A search of the building will be performed by the appropriate law enforcement personnel only
- Access to the building/job site will not be permitted until clearance is given by the appropriate personnel (i.e. police, fire department)

Civil Disturbance

Civil disorders, usually in the form of large unruly crowds, can interfere with business operations and could cause damage to property and employees.

The lead or designated employee will notify the appropriate authorities for assistance. Steps will be taken to assure the safety of all employees, business property and equipment, without creating exposure to personal injury.

FALL PROTECTION SAFETY POLICY

Pro-Tech Electric has developed and implemented this Fall Protection Policy to comply with Cal-OSHA standards and to prevent injuries or fatalities to our employees. Pro-Tech Electric will review and evaluate this policy:

- On an annual basis
- When changes occur to 29 CFR, that prompt revision of this document
- When facility operational changes occur that require a revision of this document
- When there is an accident or close-call that relates to this area of safety
- Any time fall protection procedures fail

Effective implementation of this program requires support from all levels of management. This policy will be communicated to all affected personnel. It encompasses the total workplace, regardless of the number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives.

The hazards of potential falls at heights of 6 feet and above will be addressed in this document. This instruction describes a systematic approach that will be used to prevent workers from falling. This instruction also lists some of the most common fall hazards, and provides recommendations and guidelines for selecting fall arrest systems.

Employees who fail to follow the safety procedures and protocols identified in this program will be subject to disciplinary action as specified in the company's Discipline Policy. The disciplinary actions taken can include verbal reprimand, written reprimand, or immediate termination based upon the circumstances of the violation.

The workplace will be assessed before each assigned job for potential fall hazards. Proper fall arrest equipment will be used for jobs requiring fall protection when elimination of the hazard(s) is not possible. This company will evaluate the facilities by department to determine fall hazards. This preliminary evaluation will detail the required steps for protecting employees from fall hazards.

This Fall Protection plan has been developed by a qualified person.

Training.

A training program will be provided for all employees who will be exposed to fall hazards in the work area, and will be conducted by competent personnel. The program will include but will not be limited to:

- A description of fall hazards in the work area
- Evaluation for methods to eliminate fall hazards
- Procedures for using fall prevention and fall arrest systems
- Fall arrest equipment limitations
- Evaluation of total fall distance during fall arrest
- Inspection and storage procedures for fall arrest equipment

Generally, workers will be trained to recognize the hazards of falling from elevations and to avoid falls from grade level to lower levels through holes or openings in walking/working surfaces. Training programs will include elimination, prevention, control and fall arrest systems. It must be ensured that appropriate fall arrest systems are installed, and that employees know how to use them before beginning any work that requires fall protection.

Training will be conducted prior to job assignment. Pro-Tech Electric will provide training to ensure that the purpose, function, and proper use of fall protection is understood by employees and that the knowledge and skills required for the safe application and usage is acquired by employees. This standard practice instruction will be provided to, and read by all employees receiving training. The training will include, as a minimum, the following:

- Types of fall protection equipment appropriate for use.
- Recognition of applicable fall hazards associated with the work to be completed and the locations of such.
- Fall arrest anchor point capacity requirements.
- Procedures for removal of fall protection and arrest devices from service for repair or replacement.

All other employees whose work operations are, or may be, in an area where fall protection devices may be utilized, will be instructed to an awareness level concerning hazards associated with fall protection operations.

- Equipment maintenance and inspection requirements.
- Equipment donning and doffing procedures.
- Equipment strengths and limitations

Pro-Tech Electric will certify that employee training has been accomplished and is kept up to date. The certification will contain each employee's name and dates of training. Training will be conducted by competent personnel:

The titles for documents and materials used for training include:

- Refresher training. This standard practice instruction will be provided to, and read by all employees receiving refresher training. The training content will be identical to initial training. Refresher training will be conducted on a semi-annual basis or when the following conditions are met, whichever event occurs sooner.
- Retraining will be provided for all authorized and affected employees whenever (and prior to) a change in their job assignments, a change in the type of fall protection equipment used, or when a known hazard is added to the work environment which affects the fall protection program.
- Additional retraining will also be conducted whenever a periodic inspection reveals, or whenever this employer has reason to believe, that there are deviations from, or inadequacies in, the employee's knowledge or use of fall protection equipment or procedures.

- Whenever a fall protection procedure fails.
- The retraining will reestablish employee proficiency and introduce new or revised methods and procedures, as necessary.

Certification.

The company will certify that employee training has been accomplished and is being kept up to date. The certification will contain each employee's name and dates of training.

Control Procedures Development.

Once a facility evaluation has been accomplished, procedures will be developed, documented and utilized for the control of potential fall hazards. Fall prevention plans will be designed by competent personnel. These competent personnel will be provided with any required specialized training to recognize fall hazards, to understand and address fall prevention techniques, and to become familiar with fall arrest equipment and procedures. It is critical that they consider fall protection design for the safety of operations where employees must work at elevated heights. Safety during access and egress from elevated work sites will also be considered. The following guidelines will be used when planning work at elevated heights:

- Involve the Safety Coordinator early in the project planning/job planning so that they can recommend appropriate fall-protection measures and equipment.
- Involve qualified Engineers when load rating of anchorage points must be determined or is in doubt. Required training will be provided as necessary.
- Involve Engineering and Maintenance when anchorage points must be installed.
- The company will use the expertise of fall protection equipment manufacturers as needed.

Procedural Format.

The following format will be followed when developing fall protection procedures. Shane Cutler will be responsible for the implementation of these procedures. The procedures will clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized to control fall hazards, and the means to enforce compliance including, but not limited to, the following:

- A specific statement of the intended use of the procedure.
- Interviews with employees and groups of employees whose work environment includes or may include fall hazards.
- Physical observations of the work environment(s) that involve fall hazards or the potential of such.
- Observations of individuals and their job tasks and work habits that expose them to existing or potential fall hazards.
- The procedures contained in the company fall protection program.
- Specific procedural steps for the use and operation of body harness systems, and other fall protection systems.

- Specific procedural steps for the placement, erection, inspection, maintenance, disassembly and transfer of fall protection systems or devices and the person(s) responsible for them.
- Specific requirements for testing fall protection systems or equipment to determine and verify the effectiveness of the fall protection control measures (not load testing).
- The correct procedures to rescue employees who have fallen.
- The role of each employee in fall protection plans and applicable policies.
- Specific requirements for testing fall protection systems or equipment.

Protective Materials and Hardware.

Appropriate fall protection devices will be provided for potential fall hazards. Selection of the equipment will be based on the fall protection evaluation. Evaluations will be conducted by the following personnel authorized to evaluate fall protection requirements.

Fall Protection devices will be singularly identified; will be the only devices(s) used for controlling falls; will not be used for other purposes; and will meet the following requirements:

- Capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
- Anchor points will not deteriorate when located in corrosive environments such as areas where acid and alkali chemicals are handled and stored.
- Capable of withstanding the ultimate load of 5,000 lbs., or 2 times the fall arrest impact load, for the maximum period of time that exposure is expected.
- Standardization within company facilities. Fall protection devices will be standardized whenever possible.

All floor openings, including a stairway, ladderway, hatchway, chute, skylight, pit, and manhole must be guarded by fixed or removable railings, screens, or toeboards. The rule describes the applicable guard for each type of opening.

Every wall, window wall, and chute wall opening from which there is a drop of more than 6 feet must be guarded by one or more protection devices described in the rule. Every temporary wall opening must have adequate guards but these need not be of standard construction.

All open-sided floors, platforms, and runways must be guarded by a railing and, in certain cases, by a toeboard. Guard rails shall be able to withstand at least 200 pounds of force applied in any direction on the top rail.

Fall Protection Systems.

When fall hazards cannot be eliminated through any other means, fall arrest systems will be used to control falls. Proper training on the use of fall arrest equipment is essential and will be provided prior to use.

Pro-Tech Electric does not utilize site specific fall protection plans like “Controlled Access Zones” or “Safety Monitoring Systems”.

Full Body Harness Systems. A full body harness system consists of a full-body harness, lanyards with energy shock absorbers or retractable fall limiters, all with double-locking snap hooks. Before using a full- body harness system, the supervisor and/or the user must address such issues as:

- Has the user been trained to recognize fall hazards and to use fall arrest systems properly?
- Are all components of the system compatible according to the manufacturer’s instructions?
- Have appropriate anchorage points and attachment techniques been reviewed?
- Has free fall distance been considered so that a worker will not strike a lower surface or object before the fall is arrested?
- Have swing fall hazards been eliminated?
- Have safe methods to retrieve fallen workers been planned?
- Has the full-body harness and all of its components been inspected both before each use and on a regular semi-annual basis?
- Is any of the equipment, including lanyards, connectors, and lifelines, subject to such problems as welding damage, chemical corrosion, or sandblasting operations?

Retractable Lifelines

A properly inspected and maintained retractable fall limiter, when correctly installed and used as part of the fall arrest system, automatically stops a person’s descent in a short distance after the onset of an accidental fall. Retractable fall limiters may be considered when working in areas such as on roofs and scaffolds, or in tanks, towers, vessels, and manholes. Also, retractable fall limiters must be considered when climbing such equipment as vertical fixed ladders. Before using a retractable fall limiter, the supervisor and/or the user must address the following questions:

- Has the user been trained to use a retractable fall limiter correctly?
- Is the retractable fall limiter being used in conjunction with a complete fall arrest system?
- Is the equipment under a regular maintenance program?
- Has the equipment been inspected within the last six months?

Harnesses for general purpose work must be Class III, constructed with a sliding back D-ring. Standard harnesses are suitable for continuous fall protection while climbing, riding, or working on elevated personnel platforms. They are suitable for positioning, fall arrest, and the rescue and evacuation of people who are working at elevated heights.

Guard rails must be installed in any location where there is a possibility of a fall of 6 feet or more. The guard rails shall be 42 inches vertically, from the floor and a 4 inch toe board shall be installed at the edge of the hazard. Typical locations that require guard rails include: Floor Openings, Wall Openings and Open-sided Floors, Platforms, and Runways,

Inspection and Maintenance.

To ensure that fall protection systems are ready and able to perform their required tasks, a program of inspection and maintenance will be implemented and maintained. The following as a minimum, will comprise the basic requirements of the inspection and maintenance program:

- Equipment manufacturer's instructions will be incorporated into the inspection and preventive maintenance procedures.
- All fall protection equipment will be inspected prior to each use, and a documented inspection at intervals not to exceed 6 months, or in accordance with the manufacturers guidelines.? is 8.2 needed or does 8.3 cover it?
- The user will inspect his/her equipment prior to each use and check the inspection date.
- Any fall protection equipment subjected to a fall or impact load, will be removed from service immediately and inspected by a qualified person (sent back to the manufacturer).
- Check all equipment for mold, damage, wear, mildew, or distortion.

Hardware

- Ensure that no straps are cut, broken, torn or scraped.
- Special situations such as radiation, electrical conductivity, and chemical effects will be considered.
- Equipment that is damaged or in need of maintenance will be tagged as unusable, and will not be stored in the same area as serviceable equipment.
- A detailed inspection policy will be used for equipment stored for periods exceeding one month.
- Anchors and mountings will be inspected before each use by the user and supervisor for signs of damage.
- Guard rails will be sturdy, well anchored and in compliance with Federal and/or local regulations.
- Ladders, Mobile Ladder Stands and Scaffolding shall meet or exceed the National and/or local regulatory requirements.

Most Common and Most Dangerous Fall Hazards.

The tasks and situations listed below present inherent fall hazards. Give special attention to providing fall prevention and/or fall control for them, remembering that this attention is necessary in the design, engineering, planning, and execution stages of work. Supervisors will give special consideration to fall protection for the following tasks:

- Working from crane booms and tower cranes.
- Working on top of machinery and equipment, such as overhead cranes, furnaces, conveyors and presses.
- Other work that involves fall hazards, such as 'off-chutes' from main piping in duct work or boilers.

- Working on roofs.
- Working over chemical tanks or open pits.
- Working from a fixed or portable ladders, or climbing systems.
- Performing work on water towers, product tanks, silos, pipe racks, presses, and floor pits.
- Working around unguarded edges of work platforms, racking systems and elevated surfaces

Rescue Procedures

Pro-Tech Electric has adopted a policy of a prompt rescue in the event of a fall if the employee is not able to effectively perform a self-rescue. Our rescue plan includes the following types and circumstances:

Self-Rescue: If the person working at heights has properly selected and used his or her fall protection equipment, 90% of workers will be able to perform a Self-Rescue, which should include these steps:

- Climbing back up to the level from which he fell (from a few inches to 2-3 feet).
- Returning to the floor or ground to be evaluated for possible medical attention per OSHA.
- Removing all components of fall arrest system impacted by the fall event from service and documenting (bag and tag) the components with name, date and activity at time of fall and giving the equipment to management.

Assisted Self-Rescue With Mechanically Aided Hauling/Rope System: If self-rescue is not possible, then an Assisted Self Rescue will be needed. The following guidelines should be used during a mechanically aided rescue:

- The Capital Safety Rollgliss™ R550 or other compliant rescue and descent device will be secured to an anchor that is rated for at least 3,000 lbs.
- The haul line may be swung over or lowered to the fallen worker, who will grab the rescue lifeline snap hook and secure it to the appropriate D-ring on his body support. A positive connection to the D-ring must be verified by one of the rescue team members.
- The rescue team will raise or lower the fallen employee to the appropriate work platform or ground and provide medical aid as required by OSHA.
- Remove all components of fall arrest system impacted by the fall event from service and document (bag and tag) the components with name, date and activity at time of fall and give the equipment to management.

Mechanically Aided *(Unconscious) With Rope Hauling System: If the worker's injuries prevent the worker from attaching to the rescue system, both self-rescue and assisted self-rescue are not options, and a fully Assisted Rescue is necessary:

- The Capital Safety Rollgliss™ R550 or other compliant rescue and descent device will be secured to an anchor that is rated for at least 3,000 lbs.

- A rescue team member must attach the haul line to the worker's fall arrest system. This can be performed by accessing the fallen worker and then attaching the rescue system directly to a D-ring on the worker's harness, or by using a rescue pole for the attachment. The rescue team could also attach a rescue grab to the lanyard or vertical lifeline.
- The rescue team must raise or lower the fallen worker to the appropriate work platform or ground and provide medical aid as required by OSHA.
- Remove all components of fall arrest system impacted by the fall event from service and document (bag and tag) the components with name, date and activity at time of fall and give the equipment to management.

Assisted Rescue With Mechanically Aided Aerial Lift: Another means of performing a fully Assisted Rescue is to use an aerial lift under the following guidelines:

- A rescuer will get into the aerial lift and make sure there is a second fall protection device, such as a shock absorbing lanyard or self-retracting lifeline available for the fallen worker.
- The aerial lift must be maneuvered into position (raised up underneath the fallen worker) so that the rescuer can perform the rescue.
- Attach the second lanyard or self-retracting lifeline in the aerial lift to the fallen worker.
- Disconnect the rescued worker from the impacted fall arrest equipment.
- Lower the worker to the ground and provide medical aid as required by OSHA.
- Remove all components of fall arrest system impacted by the fall event from service and document (bag and tag) the components with name, date and activity at time of fall and give the equipment to management.

Any incident involving a fall will be fully investigated and documented. Any corrective actions or changes in procedures needed to prevent a recurrence will be implemented immediately.

Definitions

Anchorage means a secure point of attachment for lifelines, lanyards or deceleration devices.

Body belt means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

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

Competent person means a person who is capable of identifying hazardous or dangerous conditions in any personal fall arrest system or any component thereof, as well as in their application and use with related equipment.

Connector means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabiner, or it may be an integral component of part of the system.

Deceleration device means any mechanism with a maximum length of 3.5 feet, such as a rope grab, rip stitch lanyard, tearing or deforming lanyards, self-retracting lifelines, etc. which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Energy shock absorber means a device that limits shock-load forces on the body.

Failure means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

Fall arrest system means a system specifically designed to secure, suspend, or assist in retrieving a worker in or from a hazardous work area. The basic components of a fall arrest system include anchorage, anchorage connector, lanyard, shock absorber, harness, and self-locking snap hook.

Free fall means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

Free fall distance means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall (maximum of 6 feet). This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

Hole means a gap or void 2 inches or more in its least dimension, in a floor, roof, or other walking/working surface.

Lanyard means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline or anchorage.

Leading edge means the edge of a floor roof, or formwork for a floor or other walking/working surface which changes location as additional floor, roof, decking, or formwork sections are placed, formed or constructed. A leading edge is considered to be an unprotected side and edge during periods when it is not actively and continuously under construction.

Lifeline means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically or for connection to anchorages at both ends to stretch horizontally and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Opening means a gap or void 30 inches or more high and 18 inches or more wide, in a wall or partition, through which employees can fall to a lower level.

Personal fall arrest system means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

Positioning device system means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Qualified person means one with a recognized degree or professional certificate and extensive knowledge and experience in the subject field who is capable of design, analysis, evaluation and specifications in the subject work, project, or product.

Retractable fall limiter means a fall arrest device that allows free travel without slack rope, but locks instantly when a fall begins.

Rope grab means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

Safety-monitoring system means a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

Self-retracting fall limiter/lanyard means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

Snap hook means a connector comprised of a hook-shaped member with a double-locking mechanism that includes a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection.

Toe board means a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

Walking/Working surface means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

Warning line system means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area where fall arrest equipment is required.

Work area means that portion of a walking/working surface where job duties are being performed.

FALL PROTECTION CHECKLIST	Yes	No
Have you provided a proper fall protection system in the following areas:		
Sides and edges?		
Leading edges?		
Floor holes/skylights?		
Wall holes?		
The face of formwork and reinforcing steel?		
Ramps, runways, walkways?		
Dangerous equipment below workers?		
Overhand bricklaying and related work?		
Low-slope roof work?		
Steep roof work?		
Precast concrete erection work?		
Residential construction?		
Anywhere there may be falling objects?		
Standards for Protection Systems		
Do the following meet the design, material, and weight-bearing criteria:		
Guardrail systems, including top rails, midrails, screens, mesh, and intermediate vertical members?		
Personal fall arrest systems, including all hardware, webbing, rope or wire rope, and anchorages?		
Positioning device systems?		
Covers?		
Toeboards?		
Canopies?		
Are control lines properly flagged and placed?		
Is mechanical equipment neither used nor stored where safety monitoring systems are in place?		
Where a fall protection plan is used has it been prepared by a qualified person?		
Is a written copy of the plan maintained at the job site?		
Does the plan document why conventional fall protection systems are not sufficient?		
Training		
Do you provide training for all employees who may be exposed to fall hazards?		
Is it conducted by a competent person?		
Do you maintain a written certification record of all employee training?		
Do you provide retraining whenever changing circumstances require it or there is reason to believe an employee does not understand the requirements?		

FIRE PROTECTION/EXTINGUISHERS POLICY

Pro-Tech Electric provides portable fire extinguishers for employees to use to extinguish incipient fires. The extinguishers are mounted and located so that they are easily identified and readily accessible to employees without subjecting the employees to potential injury.

This policy covers the placement, use, maintenance, and testing of portable fire extinguishers to extinguish incipient fires at the workplace.

Shane Cutler has the responsibility to:

- Develop and revise, when necessary, the Fire Extinguisher Policy
- Provide relevant training to personnel who are authorized to use fire extinguishers.
- Develop and implement a fire extinguisher maintenance and update schedule
- Take corrective action when needed

Portable Fire Extinguisher Use

Portable fire extinguishers are provided for use by designated employees as authorized and trained to use them to fight incipient fires. All other employees must evacuate immediately upon the sounding of a fire alarm or when instructed by authorized personnel.

Selection, Types and Locations of Portable Fire Extinguishers

Selection

Portable fire extinguishers have been selected and distributed at the facility or job site on the basis of the types of anticipated workplace fires and on the size and degree of hazard that would affect their use.

Types and Ratings

Pro-Tech Electric maintains Underwriters Laboratories or Factory Mutual Laboratories approved extinguishers for the following types of potential fires:

Type A—ordinary combustibles such as wood, cloth, paper, rubber and many plastics
Type B—flammable liquids, such as gasoline, oil, grease, tar, oil-based paint, lacquer, and flammable gas
Type C—energized electrical equipment, including wiring, fuse boxes, circuit breakers, machinery and appliances
Type D—combustible metals such as magnesium and potassium (uncommon)

Locations

Portable fire extinguishers are located in or in close proximity to all fire hazard areas. Following is the maximum employee travel distance to any extinguisher in the facility or on the job site:

Type A–75 feet from a hazard area
Type B–50 feet from a hazard area
Type C–Applicable Type A or B distance
Type D–75 feet from the combustible metalworking area

Fire Extinguisher Operating Procedures

Authorized and trained employees will implement the pull-aim-squeeze-sweep (PASS) system for extinguishing incipient fires. Each employee will determine whether he or she is capable of fighting a fire on a case-by-case basis.

Following are the basic required conditions under which an employee may fight an incipient fire:

- The fire is small and at its beginning stage
- Heavy smoke is not present
- An appropriate fire extinguisher is readily available
- There is an unblocked exit immediately available for evacuation

One or more employees are authorized to get hold of the nearest appropriate extinguisher(s), move to a position upwind of the fire if the air is moving, and operate the extinguisher following the PASS procedure:

1. P—Pull the pin located in the extinguisher's handle.
2. A—Aim the nozzle at the base of the fire.
3. S—Squeeze the lever or handle.
4. S—Sweep from side to side at the base of the fire until the fire is out or the canister is empty.

Safety Precautions

Employees will evaluate the risks of fighting an incipient fire before attempting to extinguish it.

Escape if the fire grows.

If employees elect to put out a fire and it grows too large to control, they will immediately escape through the nearest exit, and close—but NEVER LOCK—the door behind them if possible.

Keep away from hazardous substances.

When hazardous substances are involved, smoke and gases released from a fire can be toxic, so employees should never attempt to put out a fire if they have any doubts about their own safety and health. If they have any doubts, employees will evacuate the area and wait for emergency responders who have the proper equipment and are trained in fire-fighting procedures.

Inspection, Maintenance, and Testing

All portable fire extinguishers will be maintained in a fully charged and operable condition and kept in their designated places at all times except during use.

Inspection and Maintenance

The Manager will visually inspect all portable fire extinguishers monthly according to the following guidelines:

- Extinguishers must be located in their designated location, secured properly and the proper type for the hazard area.
- Access to extinguishers is not obstructed.
- Extinguishers are examined for obvious physical damage, corrosion, leakage, or clogged nozzles.
- Legible operating instructions are on the extinguisher nameplate facing outward.
- Seals and tamper indicators are not broken or missing.
- Pressure-gauge readings or indicators are in the operable ranges.
- Inspection tags must be initialed and dated

Shane Cutler will conduct a maintenance check at least annually according to the following guidelines:

- Verify monthly inspection checks have been completed.
- Inspect the hose and nozzle for cracks, blockages, or other damage.
- Inspect the extinguisher shell for corrosion, dents, or other damage.

Corrective Actions

Defective extinguishers will be removed, marked or tagged with information about the defect, and placed in a designated location until repair and/or recharging is performed.

The inspector will replace extinguishers when portable fire extinguishers are removed from service for maintenance and recharging.

Annual Servicing

All portable fire extinguishers will be serviced and tag dated annually by a qualified fire extinguisher service company.

Training

Shane Cutler will provide employees authorized to use portable fire extinguishers with an educational program upon initial employment and annually thereafter to familiarize them with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.

Employees who have been designated to use firefighting equipment as part of an emergency action plan will be trained in the use of the appropriate equipment.

FIRST AID POLICY

Arrangements must be made BEFORE starting the project, to provide for prompt medical response in the event of an emergency. Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided.

- In areas where severe bleeding, suffocation, or severe electrical shock can occur, a 3 to 4-minute response time is required
- If medical attention is not available within 4 minutes, then a first aid trained person must be available on the jobsite at all times
- First Aid trained persons shall possess a valid certificate in first aid training obtained from the U.S. Bureau of Mines, the American Red Cross, or equivalent training.
- Sites with a potential of human contact with corrosive materials shall be provided with an Emergency Shower facility.
- An appropriate, weatherproof first aid kit must be on site. It must be checked weekly
- Provisions for an ambulance or other transportation must be made in advance.
- Alternative transportation must:
    - Be suitable for the types of injuries likely and the distance to be traveled.
    - Protect the occupants from the weather.
    - Have a means of communication with the destination Medical Facility.
    - Be able to accommodate a stretcher and an accompanying person if necessary.
- Contact methods must be provided
- Telephone numbers must be posted where 911 is not available.

Pro-Tech Electric has designated the Manager as having adequate training to render first aid in the event of a medical emergency in areas where emergency response time is in excess of 4-min. They will maintain appropriate first aid kits and check them weekly to assure they are properly stocked.

First aid kits shall include appropriate items determined to be adequate for the environment in which they will be used, including bottled solutions for flushing of the eyes. First Aid items will be stored in a weather proof container with individual sealed packages of each type of item.

First aid kits are located at the following locations:

• _____ • _____

Every employee shall be trained in emergency procedures including evacuation plan, alarm systems, shutdown procedures for equipment and types of potential emergencies

It is the responsibility of the Manager to review their job sites addressing all potential emergency situations.

FORKLIFT SAFETY POLICY

The purpose of our forklift policy at Pro-Tech Electric is to ensure that all forklift drivers have received the required training, are properly licensed and demonstrate an acceptable level of competency. This standard applies to any activity and operation where a forklift truck will be used, including the joint responsibility of operators and Pro-Tech Electric to ensure the good working condition of forklift trucks.

Only properly trained and authorized personnel, holding a valid operator's license are allowed to operate lift trucks. Formal training includes lecture, discussion, interactive computer learning, videos, and written materials. Practical training involves instructor demonstrations and trainee exercises. Operator evaluation with critiques are required. Current operators and new operators shall be acquainted with existent, and new equipment, and the hazards related to their operation. Mandatory refresher training shall be provided when unsafe operations are observed, after an accident, if operation a different vehicle type, changes in conditions, etc. All operators will be evaluated every three years. Training will be conducted by a qualified instructor.

Lift trucks will be thoroughly examined by an outside firm, to ensure their compliance with the maximum load rating capacity, and safe operation, prior to the first time of use, and no less than once a year. Permanent records of the needed repairs, and repairs done will be kept for each truck for a minimum of two years or working lifetime of truck. These records will be kept readily available in a logbook. Any repairs required, including but not limited to the repairs needed as a result of the regular inspection noted above, shall be completed within a reasonable time frame.

In the event that a forklift truck is awaiting repairs, such truck should continue in operation only if deemed safe by the Manager, if unsafe to operate, said truck will be locked out of service.

Daily safety checks will be conducted for every forklift truck in service. Certified operators shall conduct the Daily Safety Checks prior to every shift. Do not use forklift if any of the following conditions exist:

- The mast has broken or cracked weld-points.
- The roller tracks are not greased or the chains are not free to travel.
- Forks are unequally spaced or cracks exist along the blade or at the heels.
- Hydraulic fluid levels are low.
- Hydraulic line and fitting have excessive wear or are crimped.
- Fluid is leaking from the lift or the tilt cylinders.
- Tires are excessively worn, split or have missing tire material.
- Batteries have cracks or holes, uncapped cells, frayed cables, broken cable insulation, loose connections or clogged vent caps.

The appropriate form shall be used to record these safety checks, for each truck individually, these records should be kept readily available in the logbook. Any irregularities or defects discovered will be recorded and reported immediately to the Manager. Proper corrective action should be taken, including being locked out if necessary.

FORKLIFT INSPECTION CHECKLIST

Internal Combustion Engine Industrial Truck

Have a **qualified** mechanic correct all problems.

Engine Off Checks	OK	Maintenance Action
Leaks – Fuel, Hydraulic Oil, Engine Oil or Radiator Coolant		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel – Check Condition		
Load Backrest – Securely Attached		
Hydraulic Hoses, Mast Chains, Cables and Stops – Check Visually		
Overhead Guard – Attached		
Finger Guards – Attached		
Propane Tank (LP Gas Truck) – Rust Corrosion, Damage		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Check Water/Electrolyte Level and Charge		
All Engine Belts – Check Visually		
Hydraulic Fluid Level – Check Level		
Engine Oil Level – Dipstick		
Transmission Fluid Level – Dipstick		
Engine Air Cleaner – Squeeze Rubber Dirt Trap or Check the Restriction Alarm (if equipped)		
Fuel Sedimentor (Diesel)		
Radiator Coolant – Check Level		
Operator's Manual – In Container		
Nameplate – Attached and Information Matches Model, Serial Number and Attachments		
Seat Belt – Functioning Smoothly		
Hood Latch – Adjusted and Securely Fastened		
Brake Fluid – Check Level		
Engine On Checks – Unusual Noises Must Be Investigated Immediately	OK	Maintenance Action
Accelerator or Direction Control Pedal – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn and Lights – Functioning		
Cab (if equipped) – Heater, Defroster, Wipers – Functioning		
Gauges: Ammeter, Engine Oil Pressure, Hour Meter, Fuel Level, Temperature, Instrument Monitors – Functioning		

FORKLIFT INSPECTION CHECKLIST

Electric Industrial Truck

Have a **qualified** mechanic correct all problems.

Motor Off Checks	OK	Maintenance Action
Leaks – Hydraulic Oil, Battery		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel -- Condition		
Load Backrest Extension – Attached		
Hydraulic Hoses, Mast Chains, Cables & Stops – Check Visually		
Finger Guards – Attached		
Overhead Guard – Attached		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Water/Electrolyte Level and Charge		
Hydraulic Fluid Level – Dipstick		
Transmission Fluid Level – Dipstick		
Operator's Manual in Container		
Capacity Plate Attached – Information Matches Model, Serial Number and Attachments		
Battery Restraint System – Adjust and Fasten		
Operator Protection Sit-down Truck - Seat Belt – Functioning Smoothly Man-up Truck – Fall protection/Restraining means - Functioning		
Brake Fluid – Check level		
Motor On Checks (Unusual Noises Must Be Investigated Immediately)	OK	Maintenance Action
Accelerator Linkage – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn – Functioning		
Lights & Alarms (where present) – Functioning		
Hour Meter – Functioning		
Battery Discharge Indicator – Functioning		
Instrument Monitors – Functioning		

HAND AND POWER TOOL SAFETY POLICY

Whether furnished by Pro-Tech Electric or the employee, tools shall be maintained in a safe condition.

Use tied off containers to keep tools from falling off of scaffolds and other elevated work platforms.

- Keep the blade of all cutting tools sharp.
- Carry all sharp tools in a sheath or holster.
- Do not use impact tools such as hammers that have mushroomed heads.
- When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
- When using knives, shears or other cutting tools, cut in a direction away from your body.
- Do not carry sharp or pointed hand tools such as screwdrivers in your pocket unless the tool or your pocket is sheathed.
- Do not throw tools from one location to another, from one employee to another, from scaffolds or other elevated platforms.
- Do not carry tools in your hand when climbing. Carry tools in tool belts or hoist the tools to the work area with a hand line.
- Transport hand tools only in tool boxes or tool belts. Do not carry tools in your clothing.

Tool Boxes/Chest/Cabinet

- Use the handle when opening and closing a drawer or door of a tool box, chest, or cabinet.
- Tape over or file off sharp edges on tool boxes, chests or cabinets.
- Lock the wheels on large tool boxes, chests or cabinets to prevent them from rolling.
- Push large chests, cabinets and tool boxes; do not pull.
- Do not open more than one drawer of a tool box at a time.
- Close and lock all drawers and doors before moving the tool chest to a new location.
- Do not use a tool box or chest as a workbench.
- Do not move a tool box, chest or cabinet if it has loose tools or parts on the top.

Knives/Sharp Instruments

- When handling knife blades and other cutting tools, direct sharp points and edges away from you.
- Cut in the direction away from your body when using knives.
- Store knives in knife blocks or in sheaths after using them.
- Use knives for the operations for which they are made.
- Do not use knives as screwdrivers.
- Carry knives with their tips pointed towards the floor.
- Do not carry knives or other sharp tools in your pockets unless they are first placed in their sheath or holder.

Power Tools

Power tools present greater injury potential than hand tools. The most frequent injuries involving power tools are cuts, punctures, electric shock, burns and eye damage. Whether furnished by the employer or the employee, power tools shall be maintained in a safe condition. Follow these general safety rules for power tools:

- Know your power tool - Learn the applications and the limitations of the tool as well as the potential hazards specific to the tool.
- Ground all tools - If a tool has a three prong plug, it should be plugged only into a three prong receptacle. If an adapter must be used to accommodate a two prong receptacle, the adapter wire must be attached to a known ground. Never remove the third prong.
- Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.
- Avoid dangerous environments - Do not use power tools in damp or wet locations without proper grounding protection. Keep your work areas well lighted.
- Do not force tools - Do not force a small tool or attachment to do the job of a heavy duty tool.
- Wear proper clothing - Loose clothing or jewelry can get caught in moving parts. Proper gloves and footwear are recommended.
- Wear safety glasses when working with power tools - Wear appropriate eye, face and respiratory protection if cutting operations produce dust.
- Do not abuse cords - Never carry a tool by its cord or yank the cord to disconnect the tool from the receptacle. Keep the cord away from heat and sharp edges.
- Secure the work - Use clamps or a vise to hold the work. It is safer than using your hands and it frees both hands to operate the tool.
- Avoid accidental starting - Do not carry a plugged in tool with your finger on the switch.
- Any tool not in compliance with these requirements is prohibited; and shall be taken out of service.

FOLLOW ALL SAFETY RULES AND REDUCE THE CHANCES

OF AN ACCIDENT WITH POWER TOOLS

HAZARD COMMUNICATION PROGRAM

Company Policy

To ensure that information about the dangers of all hazardous chemicals used by Pro-Tech Electric is known by all affected workers, the following hazard communication program has been developed and implemented. A copy of this program will be maintained in each company workplace. Under this program, workers will be provided with information and training on the requirements of the Cal-OSHA Hazard Communication Standard, the operations where exposure to hazardous chemicals may occur, and how workers can access this program, as well as labels and SDSs.

This program applies to any chemical which is known to be present in the workplace in such a manner that workers may be exposed under normal conditions of use or in a foreseeable emergency. All work areas that involve potential exposure to chemicals are part of the hazard communication program. Copies of the hazard communication program are available from the Program Coordinator for review by any interested worker.

Shane Cutler is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.

Container Labeling

Shane Cutler will verify that all containers received for use and kept in the workplace will be clearly labeled in accord with the requirements of HazComm 2012, including a product identifier and words, pictogram, hazard statement, symbols, and precautionary statements, as well as the contact information (name address and telephone number) of the chemical manufacturer, importer or other responsible party.

Shane Cutler will ensure that labels on incoming chemical containers will not be defaced or removed.

Pro-Tech Electric uses chemicals directly from the manufacturer's containers. We do not use secondary containers and a secondary container labeling system is not needed.

Pro-Tech Electric ensures that workplace labels and other forms of warning are legible, in English, and prominently displayed on the container, readily available in each work area throughout each work shift. If employees that speak other languages should be added to our work force, the information may be made available in their language, however in all cases the information will be provided in English.

Shane Cutler will review the company labeling procedures annually and will update labeling procedures as required.

Safety Data Sheets (SDSs)

Shane Cutler is responsible for establishing and monitoring the company SDS program. The company will have a copy of the SDS for each chemical used in the workplace. If an SDS is not received at the time of initial shipment of chemical products, Shane Cutler will contact the supplier and request the proper SDS. An SDS might also be located on the internet and printed from that resource.

Copies of SDSs for all hazardous chemicals to which workers are exposed or are potentially exposed will be kept in a binder in the office. Workers can access SDSs by making a request to their Lead Person.

When revised SDSs are received, the revised SDS will be added to the SDS binder and the old SDS will be discarded.

Shane Cutler is responsible for reviewing the SDSs received for safety and health implications, and initiating any needed changes in workplace practices.

Employee Information and Training

Shane Cutler is responsible for employee information and training.

Every worker who will be potentially exposed to hazardous chemicals will receive initial training on the Hazard Communication standard before starting work.

The training program for new workers will include classroom style instruction with visual aids.

Prior to introducing a new chemical hazard into any work area, each worker in that work area will be given information and training as outlined above for the new chemical hazard. The training presented in a safety meeting with handout materials provided.

Hazards of Non-Routine Tasks

Periodically, workers are required to perform non-routine tasks that are hazardous. Examples of non-routine tasks are: confined space entry, tank cleaning, and painting reactor vessels. Prior to starting work on such projects, each affected worker will be given information by their Lead Person about the hazardous chemicals he or she may encounter during such activity. This information will include specific chemical hazards, protective and safety measures the worker should use, and steps the company is taking to reduce the hazards, including ventilation, respirators, the presence of another worker (buddy systems), and emergency procedures.

Informing Other Employers/Contractors on Multi-Employer Work Sites

It is the responsibility of Shane Cutler to provide other employers and contractors with information about hazardous chemicals that their workers may be exposed to on this work site, and suggested precautions for workers. It is the responsibility of Shane Cutler to obtain information about hazardous chemicals used by other employers to which our workers may be exposed.

Other employers and contractors will be provided with SDSs for hazardous chemicals generated by this company's operations by presenting their representative with a chemical list and offering to provide copies of any SDS upon request.

In addition to providing a copy of an SDS to other employers, other employers will be informed of necessary precautionary measures to protect workers exposed to operations performed by this company.

Also, other employers will be informed of the hazard labels used by Pro-Tech Electric, which consists of the original manufacturers label on the container.

List of Hazardous Chemicals

A list of all known hazardous chemicals in the workplace is attached to this program. This list includes the name of each chemical, and the work area(s) in which each of the chemicals is used. Further information on each chemical may be obtained from the SDSs, located in the office.

When new chemicals are received, this list is updated within 30 days of introduction into the workplace. To ensure that any new chemical is added in a timely manner, SDS's on new chemicals will be updated to the chemical inventory list on the 1st of every month. The hazardous chemical inventory is compiled and maintained by Shane Cutler. A copy of the chemical inventory list will be maintained on each job site.

SDSs shall be maintained and readily accessible in each work area. SDSs will be maintained at the primary work site. They are available in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives, and Cal-OSHA

Chemicals in Unlabeled Pipes

Pro-Tech Electric does not have any chemicals contained in pipes or piping.

If we should have employees working on a client site that does contain chemicals in unlabeled piping, Shane Cutler will determine the nature of the chemicals involved and advise our employees during safety meetings of the exposure and provide the appropriate PPE as needed.

Program Availability

A copy of this program will be made available, upon request, to workers, their designated representatives, and Cal-OSHA.

HEAT ILLNESS PREVENTION PLAN

Pro-Tech Electric has designated Shane Cutler to have the authority and responsibility for implementing the provisions of this program at this worksite. Shane Cutler can be contacted at these phone numbers:

Office: (951) 737-1945 Cell: (951) 858-3673

Provision of Water

- Drinking water containers (of five 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 workers whether working individually or in smaller crews, will have access to drinking water.
- Paper cone rims or bags of disposable cups and the necessary cup dispensers will be made available to workers 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 min), 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 carried, to replace water as needed.
- Water will be fresh, pure, and suitably cool and provided to employees free of charge. Supervisors will visually examine the water and pour some on their skin to insure 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 (given the working conditions and layout of the worksite), to encourage the frequent drinking of water. If field terrain prevents the water from being placed as close as possible to the workers, bottled water or personal water containers will be made available, so that workers 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 should 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 governmentally approved for potable drinking water systems, as shown on the manufactures label.
- Daily, workers will be reminded of the location of the water coolers and of the importance of drinking water frequently. When the temperature exceeds or is expected to exceed 80 degrees Fahrenheit, brief 'tailgate' meetings will be held each morning to review with employees 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) will be used to remind employees to drink water.

- When the temperature equals or exceeds 95 degrees Fahrenheit or during a heat wave, pre-shift meetings before the commencement of work to encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary will be conducted. Additionally, the number of water breaks will be increased. The Manager will lead by example and workers will be reminded throughout the work shift to drink water.
- Individual water containers or bottled water provided to workers will be adequately identified to eliminate the possibility of drinking from a co-worker's container or bottle.

Provision of Shade

- Shade structures will be opened and placed as close as practical to the workers, when the temperature equals or exceeds 80 degrees Fahrenheit. When the temperature is below 80 degrees 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 such a break at any point in time. During meal periods there will be enough shade for all of the employees who choose to remain in the general area of work or in areas designated for recovery and rest periods. (Employees may be rotated in and out of meal periods, as with recovery and rest periods.)
- Daily, workers will be informed of the location of the shade structures 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 he/she is experiencing symptoms of heat illness and in no case will the employee be ordered back to work until signs or symptoms of heat illness have abated.
- Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times. All employees on a recovery, rest break or 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.
- In situations where trees or other vegetation are used to provide shade (such as in orchards), the thickness and shape of the shaded area will be evaluated, before assuming that sufficient shadow is being 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 of the steps that will be taken to provide shade upon request.
- For non-agricultural employers, in situations where it is not safe or feasible to provide shade (mobile equipment and vehicle hazards, high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide alternative cooling measures but with equivalent protection as shade.

Weather Monitoring

The Manager will be trained and instructed to check in advance the extended weather forecast. Weather forecasts can be checked at http://www.nws.noaa.gov/, or 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 advance planning should take place all summer long.

CALIFORNIA Dial-A-Forecast

Eureka 707-443-7062
Hanford 559-584-8047
Los Angeles 805-988-6610 (#1)
Sacramento 916-979-3051
San Diego 619-297-2107 (#1)
San Francisco 831-656-1725

- 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. A Determination will be made of whether or not workers will be exposed at 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 degrees if the workers under consideration are in direct sunlight.

- Prior to each workday, the Manager will monitor the weather (using http://www.nws.noaa.gov/ or with the aid of a simple thermometer, available at most hardware stores) at the worksite. This critical weather information will be taken into consideration, to determine, when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).

- A thermometer will be used at the jobsite to monitor for sudden increases in temperature, and to ensure that once the temperature exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95 degrees Fahrenheit, additional preventive measures such as the High Heat Procedures will be implemented.

Handling a Heat Wave:

For purposes of this section only, "heat wave" means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees 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 (example 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 our heat illness prevention procedures, the weather forecast and emergency response. In addition, if schedule modifications are not possible, workers will be provided with an increased number of water and rest breaks and will be observed closely for signs and symptoms of heat illness.

- 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.

High Heat Procedures

High Heat Procedures are additional preventive measures that Pro-Tech Electric will use when the temperature equals or exceeds 95 degrees Fahrenheit.

- Effective communication by voice, direct observation, mandatory buddy system, or electronic means will be maintained, so that employees at the worksite can contact a supervisor when necessary. If the supervisor is unable to be near the workers (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 (keep tabs on them 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 his or her own.
- Effective communication and direct observation for alertness and/or signs and symptoms of heat illness will be conducted frequently. When the Manager is not available, a designated alternate responsible person must be assigned, to look for signs and symptoms of heat illness. If a Manager, designated observer, or any employee reports any signs or symptoms of heat illness in any employee, the Manager or designated person will take immediate action commensurate with the severity of the illness (see Emergency Response Procedures).
- Employees will be reminded constantly throughout the work shift to drink plenty of water and take preventative cool-down rest break when needed.

Acclimatization

Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted. Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. We are responsible for the working conditions of our employees, and we must act effectively when conditions result in sudden exposure to heat our employees are not used to.

- The weather will be monitored daily. The Manager will be on the lookout for sudden heat wave(s), or increases in 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 be cut short (example 12 p.m.), will be rescheduled (example conducted at night or during cooler hours) or if at all possible cease for the day.

- New employees, or those employees who have been newly assigned to a high heat area, will be closely observed by the Manager for the first 14 days. The intensity of the work will be lessened during a two-week break-in period (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 will be documented.
- The Manager 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 coworker to 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 be on the lookout for possible symptoms of heat illness.
- Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how these company procedures address it.

Emergency Response

- Prior to assigning a crew to a particular worksite, workers and the Manager will be provided a map of the site, along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads), to avoid a delay of emergency medical services.
- Prior to assigning a crew to a particular worksite, efforts will be made to ensure that a qualified and appropriately trained and equipped person is available at the site to render first aid if necessary.
- Prior to the start of the shift, a determination will be made of whether or not a language barrier is present at the site and steps will be taken (such as assigning the responsibility to call emergency medical services to the Manager or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.
- The Manager will carry a cell phone 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 is showing symptoms of possible heat illness, steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness). Under no circumstances will the affected employee be left unattended.
- At remote locations such as rural lots or undeveloped areas, the Manager will designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.
- During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their Manager any signs or symptoms they are experiencing.

Employee and Manager training will include every detail of these written emergency procedures.

Handling a Sick Employee

- When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check 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 worker will not be left alone in the shade, as he or she can take a turn for the worse!
- When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor 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 heat illness (decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, incoherent speech, convulsions, or red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, first aid will be initiated (cool the worker: place the worker in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim). Do not let a sick worker leave the site, as they can get lost or die before reaching a hospital!
- If an employee does not look OK and displays signs or symptoms of severe heat illness (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, the Manager will call emergency service providers, communicate the signs and symptoms of the victim and request Air Ambulance.

Employee and Supervisory Training

To be effective, training must be understood by employees and given in a language the employees understand. Pro-Tech Electric will maintain records of the training showing the date of training, who performed the training, who attended training and subject(s) covered.

- The Manager will be trained prior to being assigned to supervise other workers. Training will include our written procedures and the steps the Manager will follow when employees' exhibit symptoms consistent with heat illness.
- The Manager will be trained on their responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without retaliation.
- The Manager will be trained in appropriate first aid and/or emergency responses to different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.
- The Manager will be trained on how to track the weather at the job site (by monitoring predicted temperature highs and periodically using a thermometer).
- The Manager will be instructed on, how weather information will be used to modify work schedules, to increase number of water and rest breaks or cease work early if necessary.
- All employees and supervisors will be trained prior to working outside. Training will include all aspects of implementing an effective Heat Illness Prevention Plan including but not limited to; providing sufficient water, providing access to shade, high-heat

procedures, emergency response procedures and acclimatization contained in the company's written prevention procedures.

- Employees will be trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, 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 degrees Fahrenheit, short 'tailgate' meetings will be held to review the weather report, to reinforce heat illness prevention with all workers, to provide reminders to drink water frequently, to inform them that shade can be made available upon request and to remind them to be on the lookout for signs and symptoms of heat illness.
- New employees will be assigned a "buddy" or experienced coworker to ensure that they understand the training and follow company procedures.

LADDER SAFETY POLICY

Pro-Tech Electric has developed and implemented this ladder safety plan to protect employees from injury while using ladder equipment in the performance of their jobs.

To use ladders safely and effectively, employees must:

1. Know the rules of ladder safety.
2. Observe these rules at all times.

Remember that practically all falls from ladders can be traced to using them in an unsafe manner. When a fall occurs, the person who falls usually gets hurt. This means that you must observe ladder safety rules because you are the one who will get hurt if you don't.

TECHNICAL INFORMATION

Ladder safety begins with the selection of the proper ladder for the job and includes inspection, setup, proper climbing and standing, proper use, care, and storage. In addition to the general safety rules for all ladders there are special rules for using stepladders and for single and extension ladders.

These safety rules are proven commonsense procedures. This combination of safe equipment and its safe use can eliminate most ladder accidents.

Ladder Selection

1. Be sure the ladder being used has the proper duty rating to carry the combined weight of the user and the material being installed. Load limits shall not be exceeded.
2. A ladder's duty rating tells you its maximum weight capacity. There are four categories of duty ratings:

Type IA These ladders have a duty rating of 300 pounds. Type IA ladders are recommended for extra-heavy-duty industrial use.	**Type I** These ladders have a duty rating of 250 pounds. Type I ladders are manufactured for heavy-duty use.
Type II These ladders have a duty rating of 225 pounds. Type II ladders are approved for medium-duty use.	**Type III** These ladders have a duty rating of 200 pounds. Type III ladders are rated for light-duty use.

3. **Type IA and Type I ladders are the only acceptable ladders on a construction jobsite.**
4. The American National Standards Institute (ANSI) requires that a duty rating sticker be placed on the side of every ladder so users can determine if they have the correct type ladder for each task/job.

5. Be sure that metal steps and rungs are grooved or roughened to prevent slipping.

Use the proper size ladder for the job. The average employee will generally work most comfortably at his shoulder level, which is about 5 feet above where he stands. Since the employee must stand at least 2 feet down from the top of a ladder, the maximum working height would be about 3 feet above the top of the ladder or 5 feet minus 2 feet. For example, a 5-foot stepladder would give an effective working height of 8 feet or 5 feet plus 3 feet. When using straight or extension ladders, the employee stands 3 feet down from the top, which gives an effective working height of 2 feet above the ladder top.

Ladder Inspection

1. Always check a ladder before using it. Inspect wood ladders for cracks and splits in the wood. Check all ladders to see that steps or rungs are tight and secure. Be sure that all hardware and fittings are properly and securely attached. Test movable parts to see that they operate without binding or without too much free play. Inspect metal and fiberglass ladders for bends and breaks.
2. Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use. The ladder shall meet OSHA/ANSI standards.
3. Never use a damaged ladder. Tag it "Defective" and report it to the company so that it may be removed from the job.

Ladder Setup

1. Place ladder feet firmly and evenly on the ground or floor. Make sure the ladder is sitting straight and secure before climbing it. If one foot sits in a low spot, build up the surface with firm material.
2. Do not try to make a ladder reach farther by setting it on boxes, barrels, bricks, blocks or other unstable bases.
3. Do not allow ladders to lean sideways. Level them before using.
4. Brace the foot of the ladder with stakes or place stout boards against the feet if there is any danger of slipping.
5. Never set up or use a ladder in a high wind, especially a lightweight metal or fiberglass type. Wait until the air is calm enough to insure safety.
6. Never set up a ladder in front of a door unless the door is locked or a guard is posted.
7. Do not use ladders on ice or snow unless absolutely necessary. If they must be used on ice or snow, use spike or spur-type safety shoes on the ladder feet and be sure they are gripping properly before climbing.
8. Use Safety shoes on ladder feet whenever there is any possibility of slipping.

Ladder Climbing and Standing

1. Keep the steps and rungs of ladders free of grease, oil, wet paint, mud, snow, ice, paper and other slippery materials. Also clean such debris off your shoes before climbing a ladder.
2. Always face a ladder when climbing up or down. Use both hands and maintain a secure grip on the rails or rungs.
3. Never carry heavy or bulky loads up a ladder. Climb up yourself first, and then pull up the material with a rope.
4. Climb and stand on a ladder with your feet in the center of the steps or rungs.
5. Do not overreach from a ladder, or lean too far to one side. Overreaching is probably the most common cause of falls from ladders. A good rule is to always keep your belt buckle inside the rails of a ladder. Work as far as you can reach comfortably and safely, then move the ladder to a new position.
6. Never climb onto a ladder from the side, from above the top or from one ladder to another.
7. Never slide down a ladder.

Proper Use of Ladders

1. Never use metal ladders around exposed electrical wiring. Metal ladders should be marked with tags or stickers reading "CAUTION-Do Not Use Around Electrical Equipment" or similar wording. RULE of THUMB: If the overhead power line is 50 kV or less, then stay at least 10 feet away. For everything else, keep at least 35 feet away.
2. When using a ladder where there is traffic, erect warning signs or barricades to guide traffic away from the foot of the ladder. If this is not possible, have someone hold and guard the bottom of the ladder.
3. Do not try to move a ladder while you are on it by rocking, jogging or pushing it away from a supporting wall.
4. Never use a ladder when under the influence of alcohol, on drugs or medication, or in ill health.
5. If you get sick, dizzy or panicky while on a ladder, do not try to climb down in a hurry. Wait. Drape your arms around the rungs; rest your head against the ladder until you feel better. Then climb down slowly and carefully.
6. Do not leave tools or materials on top of ladders. If they fall on you, you can be hurt. If they fall on someone else, your company can be sued.
7. Never push or pull anything sideways while on a ladder. This puts a side load on the ladder and can cause it to tip out from under you.
8. Allow only one person at a time on a ladder unless the ladder is specifically designed for two people.

9. Never use a ladder as a horizontal platform, plank, scaffold or material hoist.
10. Be cautious about homemade ladders. Never use ladders made by fastening cleats across a single narrow rail, post or pole.
11. Never use a ladder on a scaffold platform. If you need to reach higher, the scaffold should be higher.

Proper Ladder Care and Storage

1. Maintain ladders in good condition.
2. Keep all ladder accessories, especially safety shoes, in good condition.
3. Wood ladders, which are to be used outside, should be treated to prevent weather damage. A clear finish or transparent penetrating preservative should be used. Linseed oil is a good treatment for a wood ladder, although it does add some weight to the ladder. An oil treatment also helps to rustproof the metal parts of a wood ladder.
4. Never paint a wood ladder. This will cover dangerous cracks or fill and hide them.
5. Never sit on ladder side rails.
6. Never use a metal or fiberglass ladder which has been exposed to fire or strong chemicals, it should be discarded.
7. Never store materials on a ladder.
8. Store wood ladders where they will not be exposed to excessive heat or dampness. Store fiberglass ladders where they will not be exposed to sunlight or other ultraviolet light sources.
9. Be sure that ladders are properly supported and secured when in transit. Vibration and bumping against other objects can damage them.
10. Store ladders on racks, which give them proper support when not in use.

Additional Safety Rules for Stepladders

1. Never use a stepladder over 20 feet long.
2. Always open a stepladder completely and make sure the spreader is locked open before using the ladder.
3. Never substitute makeshift devices of wire or rope for stepladder spreaders.
4. Do not stand higher than the second step from the top of a stepladder. Especially, do not stand or sit on the top cap, or stand on the pail shelf, or on the back of a stepladder.
5. Do not straddle the front and back of a stepladder.

Additional Safety Rules for Single Ladders and Extension Ladders

Ladder Selection and Inspection

1. Remember that the sections of an extension ladder should overlap enough to retain the strength of the ladder using the following table:

Length of Ladder	Required Overlap
Up to 36 feet	3 feet
Over 36 to 48 feet	4 feet
Over 48 to 60 feet	5 feet

2. Of course, the usable length of the ladder is shortened by the amount of the overlap.
3. Never splice or tie two short ladders together to make a long section.
4. Top support for a ladder is as important as good footing. The top should rest evenly against a flat, firm surface. If a ladder is to be leaned against roof gutters, the strength and stability of the gutters should first be tested.
5. When a ladder is used for access to an upper landing surface, it must extend three rungs, or at least three feet above the landing surface.
6. A ladder used for access to an upper landing surface should be secured against sideways movement at the top or held by another worker whenever it is being used.
7. Extend an extension ladder only from the ground. Determine the needed height, extend and lock the fly section securely in place then set it up against the wall. Check for stability and support before climbing.
8. If possible, the base of a long ladder should be secured to the ground and the top should be tied to the upper landing surface.
9. The technically proper angle for a non-self-supporting ladder is about 75 degrees above horizontal. This means that the base should be set out one-fourth of the ladder's height to its top support point. For example, if a ladder is to be supported at a point 20 feet off the ground, its base should be set 5 feet out from the wall (20 feet divided by 4= 5feet). An easy way to measure this, if the ladder top will rest against the wall, is to pace off the length of the ladder or count the rungs, and divide by four to get the proper distance from the wall for placing the foot of the ladder.
10. If ladders are set up at a steeper angle than 75 degrees above horizontal, they are more likely to tip backward in use. As a minimum they must be tied off at the top to prevent this from happening.
11. If ladders are set up at an angle less than 75 degrees above horizontal, they are more likely to slide out from the bottom. Safety ladder shoes or base tying is a must in this case.
12. The distance from the foot of a ladder to the wall should never be more than one-half the height to the support point, an angle of about 63 degrees above horizontal. Otherwise, more strain will be put on the side rails than they are designed to carry.

Ladder Climbing and Standing

1. Never stand on the two top rungs of a straight or extension ladder.

Proper Ladder Care and Storage

1. Metal bearings of extension ladder rung locks and pulleys should be lubricated periodically, and between regular maintenance periods whenever necessary.

2. Ropes on extension ladders should be in good condition. If they become frayed or badly worn, replace them.

Setting Up a Straight or Extension Ladder

It is very important to learn the proper methods for setting up ladders. Unless setting up is done correctly, it can cause damage to the ladder and excessive physical strain on the user.

Step 1. Lay the ladder on the ground with the base resting against the bottom of the wall and the top pointing away from the wall.

Step 2. Starting at the top of the ladder, lift the end over your head and walk under the ladder to the wall, moving your hands from rung to rung as you go.

Step 3. When the ladder is vertical, and the op touches the wall, pull out the base so that the distance away from the wall is about one-fourth of the height to the point of support.

Step 4. Reverse this process to take down the ladder. Remember that you will be walking backwards, so check for obstacles in your path before starting. Also be careful to lower the ladder slowly so that you can keep it under control and prevent its falling on you.

LOCKOUT/TAGOUT POLICY

1.0 Scope, Application & Purpose

The Occupational Safety and Health Administration's (CAL-OSHA) Standard 1910.147, "The Control of Hazardous Energy," (lockout/tagout) helps safeguard employees from the unexpected startup of machines and equipment or release of hazardous energy while performing repairs, service or maintenance.

The "Lockout/Tagout" Standard identifies the practices and procedures necessary to shut down and lockout or tagout machines and equipment. It requires that a written hazardous energy program be implemented and address the following:

- Describes safe work practices,
- Establishes formal lockout/tagout procedures,
- Trains all employees in the program, and
- Enforces the use of the procedures through periodic inspections (including disciplinary action for failure to follow them).

It shall be the duty of each employee covered by this program to become familiar with its contents and ensure compliance with its procedures. Managers shall ensure that their employees receive the knowledge, skills and ability to safely perform service, repair and maintenance of equipment requiring hazardous energy isolation.

The procedures and practices established in this program are the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is performed on machines or equipment. The procedures and safe work practices are to be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing, repairs or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

2.0 Definitions

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

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

Capable of Being Locked Out: An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it.

Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized: Connected to an energy source or containing residual or stored energy.

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

Energy Source: Employees may be exposed to hazardous energy in several forms and combinations during installation, maintenance, service or repair work. Examples include:

- Kinetic (mechanical) energy in the moving parts of mechanical systems
- Potential energy stored in pressure vessels, gas tanks, hydraulic or pneumatic systems, and springs (potential energy can be released as hazardous kinetic energy)
- Electrical energy from generated electrical power, static sources, or electrical storage devices (such as batteries or capacitors)
- Thermal energy (high or low temperature) resulting from mechanical work, radiation, chemical reaction, or electrical resistance
- Potential energy from suspended parts
- Steam and condensate systems under pressure

(**Note**: Once the energy sources are neutralized, a machine is in a ***zero mechanical state*** (ZMS). Zero mechanical state provides the greatest protection against unexpected mechanical movement. Therefore, the objective of good lockout procedures is to achieve zero mechanical state.

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

Lockout Device: A device that utilizes a positive means such as a lock, either key or combination type, to an energy isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds. Lockout devices shall indicate the identity of the employee applying the device(s).

Servicing and/or Maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment.

These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy. Additional typical situations include:

- When it is necessary to bypass or remove a guard or other safety device
- When it is necessary to place any part of your body where you could be caught by moving machinery
- When it is necessary to place any part of your body near an exposed or uninsulated electrical circuit
- When it is necessary to work on high-pressure systems or on piping which contains hazardous materials

Setting Up: Any work performed to prepare a machine or equipment to perform its normal production operation.

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

Tagout Device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed. Tagout devices shall indicate the identity of the employee applying the device.

3.0 Rules & Responsibilities

Each department that performs repairs, maintenance or servicing of equipment requiring isolation of hazardous energy shall be responsible for completing **Appendix A** of this program for every piece of equipment, machine or system covered under the scope of this program. **Appendix A** requires lockout/tagout procedures to be documented:

- A listing of the equipment requiring lockout and or tagout.
- Energy type and magnitude including stored or residual energy for each listing.
- The hazard associated with the energy.
- The method of control (sequence of lockout), including types and locations of energy isolation.
- The method of verifying isolation of the equipment, machine or system, etc.

Managers will implement this program and ensure that the employees under their supervision are trained in accordance with the procedures established herein.

4.0 Compliance with this Program

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

5.0 Training & Communication

Each department that has employees that perform work or are otherwise affected by the scope and application of this program are required to provide training to ensure that the purpose and function of this hazardous energy control program is understood by their employees. Through training, authorized employees will be required to possess the knowledge, skills and abilities for safe application, usage and removal of energy controls. **(See Training Record/Appendix D)** Training shall include the following:

- An overview of the CAL-OSHA Standard, "The Control of Hazardous Energy," and the contents of this program.
- Recognition of applicable hazardous energy sources, the type and magnitude of the energy employees are exposed to in the workplace and the methods and means necessary for energy isolation and control.
- Each affected employee shall be instructed in the purpose and use of the energy control procedure.
- All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked or tagged out.
- **Retraining** shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard or when there is a change in energy control procedures.
- **Retraining** shall also be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.
- **Retraining** shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

6.0 Sequence of Lockout

Step 1: Preparation for Lockout/Tagout

- Authorized employees shall locate appropriate lockout/tagout procedures for the type of equipment or machine that will be involved in the lockout. **(See Appendix A)**

- Authorized employees shall locate all isolating devices that apply to the equipment, machine, etc., that will be involved in the lockout/tagout procedures.

- Authorized employees shall notify all affected employees that a lockout/tagout system is going to be used and the reason e.g., necessary repairs, preventative maintenance, servicing or adjustments.

Step 2: Isolate Energy Sources

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

- De-energize all sources of hazardous energy:

    - Disconnect or shut down engines or motors.
    - De-energize electrical circuits.
    - Block fluid (gas or liquid) flow in hydraulic or pneumatic systems.
    - Block machine parts against motion.

- Block or dissipate stored energy:

    - Discharge capacitors.
    - Release or block springs that are under compression or tension.
    - Vent fluids from pressure vessels, tanks, accumulators.
    - Block raised dies, gears, or equipment that could descend or move when the energy is removed. Lower suspended loads to the floor or secure them independently.

- Secure the equipment; apply all appropriate energy-isolating/lockout devices with danger tags in a safe state. The tag, at a minimum, should have the name of the authorized employee, department, time, and date. Fill out tags completely and place them in such a way as to be immediately apparent to anyone who might attempt to operate the device. Tags must be attached by a durable means, e.g., nylon cable tie. String and tape are prohibited.

- If more than one person is required to lockout/tagout a piece of equipment, etc., each authorized employee shall place his/her own personal lockout/tagout device on the energy-isolating device(s). When an energy-isolating device cannot accept multiple locks or tags, a multiple lockout/tagout device (hasp) can be used.

Step 3: Methods of Verifying Isolation of Equipment

- After ensuring that no personnel are exposed, verify by test and/or observation that all energy sources are de-energized.

    - Review methods of verifying isolation of equipment for the specific type of equipment. (See Appendix A)
    - Operate the push button or other normal operating controls to make certain the

equipment will not operate. CAUTION: Return operating control(s) to "Neutral" or "OFF" position after the test.

- When practical, have a second authorized employee familiar with the equipment verify the integrity of your lockout.

Step 4: Perform the Necessary Work

- Remember to re-check the integrity of the lockout/tagout frequently, especially in tasks that last from several hours to several days.

Step 5: Prepare for Re-Energizing/Restoring Equipment to Service

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

    - Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed (tools, work aids and spare parts) and that the machine or equipment components are operationally intact (close cabinets and panels).
    - Check the work area to ensure that all employees have been safely positioned or removed from the area.
    - Verify that the controls are in neutral.
    - Remove the lockout devices and re-energize the machine or equipment. Note: The removal of some forms of blocking may require re-energization of the machine before safe removal.
    - Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.

Step 6: Remove Locks and Tags

- When all affected employees are ready (clear of danger points), each authorized employee may now remove his/her own locks and tags. No lock or tag shall be removed by anyone other than the employee who signed the tag except by means of the Special Lock and Tag Removal Procedure. (See Appendix B)

Step 7: Shift or Personnel Changes

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

Step 8: Group Lockout/Tagout Procedures

Whenever servicing and/or maintenance is performed by a group of employees, Pro-Tech Electric has developed and implemented an energy control procedure that provides authorized and affected employees with the same level of protection as a personal lockout or tagout device

Servicing and maintenance operations performed by a group of employees can be more complex than servicing or maintenance performed by an individual. As a result, group lockout or tagout operations typically require more coordination and communication than personal lockout or tagout operations. Greater coordination between employees is particularly important when more than one craft or department must be involved to complete the task.

Under our group lockout/tagout requirements, a single authorized employee must assume the overall responsibility for the control of hazardous energy for all members of the group while the servicing or maintenance work is in progress.

The authorized employee with the overall responsibility must implement the energy control procedures, communicate the purpose of the operation to the servicing and maintenance employees, coordinate the operation, and ensure that all procedural steps have been properly completed. In such operations, it is critical that each authorized employee involved in the group lockout/tagout activity be familiar with the type and magnitude of energy that may be present during the servicing and maintenance work.

Each employee in the group must affix his/her personal lockout or tagout device to the group lockout device before engaging in the servicing and maintenance operation. This enables the authorized employee to have control over his/her own protection, and verify that the equipment has been properly deenergized. Additionally, the lockout or tagout device will inform other persons that the employee is working on the equipment, and as long as the device remains attached, the authorized person in charge of the group lockout or tagout knows that the work has not been completed and that it is not safe to reenergize the equipment.

The servicing employee will continue to be protected by his/her lockout or tagout device until it is removed. The authorized employee in charge of the group lockout or tagout must not remove the group lockout or tagout device until each employee in the group has removed his/her personal device, indicating that he/she is no longer exposed to the hazards from the servicing operation.

When the activities involving group lockout or tagout extend into another work shift, or there is a change of authorized employees, the provisions for shift or personnel changes noted in Step 7 must also be followed.

7.0 Lockout/Tagout Devices

Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be bought and supplied by departments/facilities for isolating, securing or blocking of machines or equipment from energy sources. These devices and materials are to be provided to authorized employees.

Both lockout and tagout devices shall meet the following requirements:

- singularly identified;
- be the only device(s) used for controlling energy;
- not be used for other purposes;
- capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected;
- indicate the identity of the employee applying the device(s);
- standardized within the facility in at least one of the following criteria: (color, shape, or size).

Tagout devices shall meet the following requirements:

- constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible;
- not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored;
- and their means of attachment be substantial enough to prevent inadvertent or accidental removal;
- attachment means shall be of a non-reusable type, attachable by hand, self-locking and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece all-environment tolerant nylon cable tie;
- warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate.

Lockout devices shall meet the following requirements:

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

8.0 Contractor's Responsibilities

Whenever outside personnel (contractors) are engaged in activities covered by the scope and application of this program, the Manager of the department responsible for overseeing the contractor will be responsible for the following:

- Determine whether the outside contractor has energy control procedures and devices for the type of service the outside contractor will be conducting. If the outside contractor has no lockout/tagout procedures, then they shall comply with the procedures established in this program.
- Communicate with the outside contractor that the contractor will be responsible for performing the same lockout/tagout procedures while conducting maintenance, servicing, repairing, etc., on any department/facility equipment, machines, systems, etc., that have been locked and/or tagged out by authorized department/facility employees.
- Ensure that each authorized department/facility employee assisting the outside contractor has performed the same energy control (lockout/tagout) procedures.
- Notify affected employees of the contractor's services.

9.0 Evaluation of Program Effectiveness

Annually, Shane Cutler shall conduct an audit to ensure that the procedures outlined in this program and the requirements of the CAL-OSHA Standard 1910.147, The Control of Hazardous Energy (Lockout/Tagout) Standard are being followed.

The audit shall consist of three phases:

Phase One: Review of Lockout/Tagout Procedures

- The first phase shall consist of reviewing the lockout/tagout procedures found in **Appendix A** of this program. **Appendix A** consists of the specific equipment, machines, etc., and the procedures that have been developed by individual departments/facilities.
- The review will concentrate on ensuring that the procedures are accurate for sequence of lockout/tagout and verification of isolation.
- It shall also involve determination on whether changes in equipment or operations have occurred that would require a change (additions or subtractions) in the written procedures found in **Appendix A.**
- Finally, a review that determines that all authorized and affected employees have been trained and documentation of that training is on file.

Phase Two: Periodic Inspection

- The lockout/tagout periodic inspection record found in **Appendix C**, will be conducted annually to correct any deviations or inadequacies.
- This inspection will be conducted by David Bocanegra to evaluate each authorized employee's responsibilities under the energy control procedure being inspected.
- Once the evaluation has been completed including date, equipment, employees & the name of the inspector; the evaluation will be documented on the Lockout/Tagout Periodic Inspection Record (**Appendix C**). The records will be kept for a minimum of 3 years.

Phase Three: Retention of Records and of Inspection/Audit Procedures

- The department/facility shall maintain records documenting that procedures in Phase One have been conducted.
- The department/facility shall maintain records of Periodic Inspections **(Appendix C)** and completed/documented Special Lock and Tag Removal forms **(Appendix B)** for 3 years.
- The department/facility shall maintain training and retraining records. **(Appendix D)**

MANUAL LIFTING/MATERIAL HANDLING POLICY

Pro-Tech Electric has developed this policy to reduce injuries caused by lifting. Before manual lifting is performed, a hazard assessment will be completed. The assessment will consider size, bulk, and weight of the object(s), if mechanical lifting equipment is required, if two-man lift is required, whether vision is obscured while carrying and the walking surface and path where the object is to be carried.

Employees will be trained in general principles of ergonomics, recognition of hazards and injuries, procedures for reporting hazardous conditions, and methods and procedures for early reporting of injuries. Additionally, job specific training will be given on safe lifting and work practices, hazards, and controls.

Injuries caused by improper lifting will be investigated and documented. Incorporation of investigation findings into work procedures will be accomplished to prevent future injuries.

Where use of lifting equipment is impractical or not possible, two man lifts will be used.

Supervision must periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries. New operations should be evaluated to engineer out hazards before work processes are implemented.

Manual lifting equipment such as dollies, hand trucks, lift-assist devices, jacks, carts, hoists aree provided for our employees. Engineering controls such as conveyors, lift tables, and work station design are to be considered on a case by case basis. Employees are required to use the provided manual lifting equipment.

Employees should be aware of, and follow, these lifting guidelines:

- Plan the move before lifting; ensure that you have an unobstructed pathway.
- Test the weight of the load before lifting by pushing the load along its resting surface.
- If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or get assistance from a co-worker.
- If assistance is required to perform a lift, coordinate and communicate your movements with those of your co-worker.
- Position your feet 6 to 12 inches apart with one foot slightly in front of the other.
- Face the load.
- Bend at the knees, not at the back.
- Keep your back straight.
- Get a firm grip on the object using your hands and fingers. Use handles when they are present.
- Hold the object as close to your body as possible.

- While keeping the weight of the load in your legs, stand to an erect position.
- Perform lifting movements smoothly and gradually; do not jerk the load.
- If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
- Set down objects in the same manner as you picked them up, except in reverse.
- Do not lift an object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.
- Never lift anything if your hands are greasy or wet.
- Wear protective gloves when lifting objects that have sharp corners or jagged edges.

NFPA 70e/ARC FLASH SAFETY POLICY

Pro-Tech Electric has developed and implemented this policy to protect the health and safety of employees and the public and to minimize the probability of damage to property.

Procedures

It is the policy of Pro-Tech Electric to follow the fundamental principles of safety, which are described below. A clear understanding of these principles will improve the safety of working with or around electrical equipment.

Practice proper housekeeping and cleanliness. Poor housekeeping is a major factor in many accidents. A cluttered area is likely to be both unsafe and inefficient. Every employee is responsible for keeping a clean area and every supervisor is responsible for ensuring that his or her areas of responsibility remain clean.

Plan your work. A job briefing should be held before starting each job and include all employees involved. The briefing should cover hazards associated with the job, work procedures involved, special precautions, energy source controls, and PPE requirements. Identify hazards and anticipate problems. Think through what might go wrong and what the consequences would be. Do not hesitate to discuss any situation or question with your supervisor and coworkers. Resist "hurry-up" pressure. Program pressures should not cause you to bypass thoughtful consideration and planned procedures.

Design for safety. Consider safety to be an integral part of the design process. Protective devices, warning signs, and administrative procedures are supplements to good design but can never fully compensate for its absence. Completed designs should include provisions for safe maintenance including alerting techniques for employee safety.

Alerting techniques include safety signs and tags, barricades, and attendants. Safety signs must meet the requirements of ANSI Z535 Table 130.7(F). Barricades must be used in conjunction with safety signs and never by themselves. Any technique used must not increase the potential for employee injury.

Maintain for safety. Good maintenance is essential to safe operations. Maintenance procedures and schedules for servicing and maintaining equipment and facilities, including documentation of repairs, removals, replacements, and disposals, should be established.

Document your work. An up-to-date set of documentation adequate for operation, maintenance, testing, and safety should be available to anyone working on potentially hazardous equipment.

Keep drawings and prints up to date. Dispose of obsolete drawings and be certain that active file drawings have the latest corrections. Pro-Tech Electric shall advise the site owner of:

- Any unique hazards presented by Pro-Tech Electric's work,
- Any unanticipated hazards found during Pro-Tech Electric's work that the site owner did not mention, and

- The measures Pro-Tech Electric took to correct any hazards reported by the site owner to prevent such hazards from recurring in the future. <1>

Have designs reviewed. All systems and modifications to systems performing a safety function or controlling a potentially hazardous operation must be reviewed and approved at the level of project engineer or above.

Have designs and operation verified. All systems performing safety functions or controlling a potentially hazardous operation must be periodically validated by actual test procedures at least once a year, and both the procedures and actual tests must be documented.

Test equipment safety. Tests should be made when the electrical equipment is de-energized, or, at most, energized with reduced hazard. 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 1000 Volts and below.

When test instruments are used for the testing for 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 test is performed.

Know emergency procedures. All persons working in areas of high hazard (with high-voltage power supplies, capacitor banks, etc.) must be trained in emergency response procedures, including cardiopulmonary resuscitation (CPR) certification.

Training Requirements

Employees shall be trained in safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with their respective jobs. Employees shall be trained to identify and understand the relationship between electrical hazards and possible injury.

Documentation shall be made when the employee demonstrates proficiency, be maintained for the duration of the employee's employment, and contain each employee's name and date of training.

Retraining. An employee shall receive additional training (or retraining) under any of the following conditions:

- If the supervision 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.

- Retraining shall be performed at intervals not to exceed 3 years.

Working with Energized Equipment

This section contains safety requirements that must be met in constructing electrical equipment and in working on energized electrical equipment. Special emphasis is placed on problems associated with personnel working on hazardous electrical equipment in an energized condition. Such work is permissible, but only after extensive effort to perform the necessary tasks with the equipment in a securely de-energized condition has proven unsuccessful, or if the equipment is so enclosed and protected that contact with hazardous voltages is essentially impossible. Also special care shall be taken when working with conductive materials and equipment such as long dimensional conductor objects (ducts or pipes). Employees who may be working with such objects shall work with Shane Cutler to determine if any additional steps for safe work practices need to be taken.

Safety related work practices that pertain to qualified and unqualified electrical workers are listed below:

- Employees who face a risk of electric shock but who are not qualified persons shall be trained & familiar with electrically related safety practices.
- Only qualified persons may work on electric circuit parts or equipment that have not been deenergized. Such persons shall be made familiar with the use of special precautionary techniques, PPE, insulating & shielding materials and insulated tools.
- Unqualified persons shall not be permitted to enter spaces that are required to be accessible to qualified employees only, unless the electric conductors and equipment involved are in an electrically safe work condition.
- Employees shall be trained in safety related work practices that pertain to their respective job assignments

Clearance distances.

Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. Conductors and parts of electrical equipment that have been deenergized but not been locked or tagged out shall be treated as live parts.

Safety Glasses

Either safety glasses or a face shield must be worn when working on electrical equipment.

Personal Protective Devices/ Equipment

For work on any energized circuitry with a Class B or Class C hazard, the use of personal protective devices (e.g., face shields, blast jackets, gloves, and insulated floor mats) is encouraged, even if not required. In any case, conductive apparel shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.

Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.

All PPE used must meet the requirements in Table 130.7(C)(14). PPE requirements in the table apply to many different kinds of PPE: arc rated apparel, insulating aprons, general eye and face protection, arc rated face protection, fall protection, testing methods and specifications for footwear, glove and sleeve testing and care, hard hats, arc rated rainwear, visual inspections of rubber protective products and sleeves. The related standards for each kind of PPE are found in their ASTM or ANSI document in the table.

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. Insulating gloves shall be given an air test, along with the inspection. Such tests include:

- Blankets-before first issue/every 12 months thereafter,
- Gloves-before first issue and every 6 months,
- Sleeves before first issue and every 12 months.

Covers and Line hose shall be testing if insulating value is suspect.

Protective Systems/ GFCI's

Equipment must be designed and constructed to provide personnel protection. First-line and backup safeguards should be provided to prevent personnel access to energized circuits. Periodic tests must be established to verify that these protective systems are operative. For all 120 volt, 15 and 20 amp (branch) circuits that are cord/ plug connected, Ground Fault Circuit Interrupters (GFCI's) shall be used. GFCI's are specifically designed to protect workers, and work much faster than standard circuit breakers, and at extremely low amperage – far below the threshold at which a hazardous shock can occur. This is the primary protection, and therefore it is required that GFCI's be used as the first component in any circuit used for tools/ extension cords.

Assured Equipment Grounding Conductor Program

Secondary protection benefits may be realized by utilizing an Assured Equipment Grounding Conductor Program. This program provides for initial and periodic verification of ground continuity of all electrical power tool and extension cords. If used, continuity checks are made initially and at three month intervals. Cords that are checked shall have distinguishable taped markings placed within one foot of the male end of the cord. This program is not, however, mandatory if GFCI's are faithfully used - which is the company policy.

A written assured equipment grounding conductor program continuously enforced at the site by the Manager to ensure that equipment grounding conductors for all cord sets, receptacles that are not a part of the permanent wiring of the building or structure, and equipment connected by cord and plug are installed and maintained in good, properly grounded condition.

The following tests shall be performed on all cord sets, receptacles that are not part of the permanent wiring of the building or structure, and cord- and plug-connected equipment required to be grounded.

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.

All required tests shall be performed

- Before each use on site,
- When there is evidence of damage,
- Before equipment is returned to service following any repairs,
- At intervals not exceeding 3 months.

The tests required shall be recorded and made available to any authority having jurisdiction.

Safety Practices

Because a wide range of power supplies exist, no one set of considerations can be applied to all cases. 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 Table 130.2 of NFPA 70E; and the decision making process necessary to determine the degree and extent of the hazard and the personal protective equipment and job planning necessary to perform the task safely.

Program elements might include:

- evaluations,
- anticipating unexpected events,
- all electrical parts are considered live until proven otherwise, work permits,
- electrical flash arc hazard analysis.
- The following classification scheme may be helpful in assessing power-supply hazards.

Power supplies of 50 volts or less with high current capability too often are not considered a shock hazard, although these voltages are capable of producing fatal shocks. Since they are not "high voltage," such power sources frequently are not treated with proper respect.

In addition to the obvious shock and burn hazards, there is also the likelihood of injuries incurred in trying to get away from the source of a shock. Cuts or bruises, and even serious and sometimes fatal falls, have resulted from otherwise insignificant shocks.

Power supplies of 300 volts or more, with lethal current capability, have the same hazards to an even greater degree. Because supplies in this category are considered Class C hazards, they must be treated accordingly.

High-voltage supplies that do not have dangerous current capabilities are not serious shock or burn hazards in themselves and are therefore often treated in a casual manner. However, they are frequently used adjacent to lower-voltage lethal circuits, and a minor shock could cause a rebound into such a circuit. Also, an involuntary reaction to a minor shock could cause a serious fall (for example, from a ladder or from experimental apparatus).

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.

For work considered within the Limited Approach Boundary, a hazard/risk evaluation prior to work being done should be performed. Hazard Analysis should contain evaluations, anticipating unexpected events, all electrical parts are considered live until proven otherwise, work permits, electrical flash arc hazard analysis, event severity, frequency, probability and avoidance to determine the level of safe practices employed.

Arc flash risk assessments include determining appropriate safety related work practices, the arc flash boundary requirements, and the PPE required to minimize the risk of electric shock. Assessments must be documented and equipment field marked with a label. These assessments must be reviewed prior to beginning work.

Only qualified persons shall perform tasks such as testing, troubleshooting, and voltage measuring within the limited approach boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.

<u>More than 300 Volts</u>

To work on systems with voltages greater than 300 volts (CLASS B OR C HAZARD): Open the feeder breaker, roll out if possible, tag out, and lock if in enclosure. If work is on circuits of 600 V or more, positive grounding cables should be attached to all three phases. Tag should contain who, why, and when information, and it is of vital importance because a person's life may depend on it. "Vital" in this case means that the presence and status of the tag are inviolate, and the tag must not be altered or removed except by the person who attached it.

<u>Less than 300 Volts</u>

To work on systems with voltages less than 300 volts (CLASS A HAZARD): Turn-off and tag the feeder breaker. Tag is inviolate except on projects where established circuit checkout procedure allows a qualified person to remove it and energize circuit after checkout is complete.

Working On or Near Live Circuits

Working on live circuits means actually touching energized parts. Working near live circuits means working close enough to energized parts to pose a risk even though you make be working on de-energized parts. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.

Protective shields, protective barriers or insulating materials as necessary shall be used when working in confined or enclosed work spaces where electrical hazards may exist. 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. Common tasks where you need to work on or near live circuits include:

- Taking voltage measurements
- Opening and closing disconnects and breakers
- Removing panels and dead fronts
- Opening electric equipment doors for inspection.

Working on or Around Exposed Powerlines

Proper clearances shall be maintained under and around energized exposed wiring. For wiring 300V and below, the clearance distance for unqualified workers is 3 ft. For overhead lines under 50,000 volts, the minimum clearance is 10ft. around the conductors, or 4ft. when driving under lines for unqualified workers.

The lines shall be deenergized and grounded or other protective measures shall be provided before work is started if the worker has to be closer than the above clearance.

Annual Audits

An audit will be performed every year to ensure the requirements in the written program are being performed by the employees. The written program will be updated if auditing determines that employees are not following it or if another issue is identified with potential hazardous exposure.

NOISE EXPOSURE/HEARING CONSERVATION POLICY

SCOPE AND APPLICATION

The objective of this Hearing Conservation Program is to eliminate noise induced occupational hearing loss while complying with CAL-OSHA's regulation 1910.95. This program applies to all persons working in areas or with equipment that noise exposure exceeds an 8-hr Time Weighted Average (TWA) of 85 DBA, slow response, or higher. All departments affected will maintain a copy of this program.

RESPONSIBLITIES

Management's Responsibilities:

- To budget for cost of the audiometric testing, purchasing and hearing protection devices.
- To ensure Manager's are knowledgeable on this program and to supervise the use and care of the hearing protection by their employees.
- To determine where high noise levels exist in operations.
- To evaluate hearing protection for the specific noise environments in which the protector will be used.
- Assign a program coordinator

Manager Responsibilities:

- Recipient of assignment of program coordinator
- Coordinating Annual Testing
- Maintaining required records
- Employee Training
- Coordinating Noise Surveys

Employees' Responsibilities:

- Wear hearing protection as they have been trained
- Notify their Manager if they notice increase/decrease of noise, change in the environment
- Daily care and maintenance of hearing protection.

NOISE MONITORING:

Sound surveys will be conducted to determine occupational noise levels that employees are exposed to. This may be accomplished by the use of sound level meters and personal dosimeters. In addition, a sound level survey will be conducted whenever new equipment is installed, a change in equipment or process or controls affects the noise levels, or whenever there are any significant changes in the work place that affect the noise levels.

Results of the surveys and monitoring will be communicated to the effected employee. Records of all noise monitoring will be maintained permanently.

All areas with noise levels exceeding 85dBA will have caution signs posted to inform employees of the high noise level in the area and that hearing protection is required.

EMPLOYEE AUDIOMETRIC TESTING

All employees whose exposures equal or exceed an 8-hr time weighted average of 85dBA and are required to work in posted high noise areas are required to take a baseline audiogram at the time of employment. Licensed or certified audiologist, otolaryngologist or other physician who is certified by the Council of Accreditation in Occupational Hearing Conservation will perform this test. This will be at no cost to the employee.

New employees should be tested within 1 month of employment. The hiring Manager will arrange testing in coordination with the program coordinator. The results of the hearing test are used solely to determine a baseline.

At least annually after obtaining the baseline audiogram, the Pro-Tech Electric shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.

If a threshold shift has occurred, use of hearing protection shall be re-evaluated and/or refitted and if necessary a medical evaluation may be required.

All employees working in posted high noise areas are required to take an annual hearing test. Scheduling will allow employees to be tested during normal working hours. The Manager should make the necessary schedule and/or staffing arrangements to allow employees the opportunity to be tested.

In order to obtain a valid test, managers shall ensure that employees being tested have not been exposed to occupational noise in excess of 85dBA for 14 hours prior to testing. This can be accomplished by strictly enforcing the use of hearing protection in high noise areas.

A letter will be sent to all employees notifying them of the results of their hearing test. The technician at the medical office will monitor employee audiograms and results. The technician will then communicate any changes to the employee and program coordinator.

Employees with a Standard Threshold Shift (STS) shall be notified of the threshold shift within 21 days from the date the program coordinator is made aware of the STS. Each employee with a STS will receive individual counseling from the program coordinator within this time frame.

Counseling will consist of the specific requirements of 1910.95 (g) and employees are required to sign a form acknowledging that these requirements are met.

PERSONAL HEARING PROTECTION

The use of hearing protection is mandatory in all posted high noise areas. Each department is responsible for providing hearing protection for their employees. Hearing protection devices will be evaluated for the specific noise environments in which the protection device will be used. Several types of hearing protection will be approved for use and employees will be given the opportunity to choose the type of hearing protection they wish to use.

This is done at no cost to employee. Hearing protection shall be replaced as necessary. The Manager shall ensure that hearing protectors are worn. Employees shall be properly trained in the use, care & fitting of protectors

Disposable earplugs should be readily available for use by any visitors to high noise areas. Department managers should ensure that visitors entering their area are informed of the hazards present and the required use of hearing protection.

EMPLOYEE TRAINING

CAL-OSHA requires that all employees exposed to 85dBA or above must receive training on an annual basis. The training will include the following: the effects of noise on hearing, the disadvantages and advantages of hearing protectors, the types, selection, use, and care of those protectors, and the purpose of audiometric testing and procedures involved.

DATA MANAGEMENT

Employee audiograms and sound surveys will be analyzed by outside consultants who will provide testing and survey results and recommendations to the program manager. The program coordinator will maintain sound survey results and recommendations.

Employee audiograms, medical referrals, and threshold counseling forms will be kept in the employee's medical surveillance file in the human resources department. Information in the medical surveillance files is not to be released without the employee's permission.

Accurate records of all employee exposure and audiometric measurements shall be maintained as required by the regulation.

APPENDIX A – SPECIFIC ASSIGNED RESPONSIBILITIES

The following are specific assigned responsibilities under this Hearing Conservation Program. The purpose of these assigned responsibilities is to increase ownership in the program at all levels as well as ensuring implementation and compliance with the elements of the program.

Associates identified in each tier group are responsible for performing those specific assignments.

Manager:	Assignment:

Manager:	Assignment:

Employee:	Assignment:

Others:	Assignment:

APPENDIX B - TRAINING ATTENDANCE SHEET

HEARING CONSERVATION PROGRAM

29 CFR 1910.95

DATE:	
INSTRUCTOR:	
TRAINING A/V MATERIALS:	

NAME:	DEPARTMENT
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NON-DOT DRUG & ALCOHOL POLICY

Pro-Tech Electric is a Drug and Alcohol Free Workplace. Any violation of our drug and alcohol policies will result in disciplinary action, up to and including termination of employment.

- Drug and alcohol testing will be conducted pre-employment for all applicants.
- Employees will be tested at random for drug and alcohol use. Random testing will be set up in a fair and unbiased manner.
- If a company official or competent person has determined there is reasonable cause or suspicion that an individual is performing work under the influence, then that individual will be required to submit to a drug and alcohol test
- Possession of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Use of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Being under the influence of non-prescription drugs or any alcoholic beverage is prohibited on company property or company job sites.
- Any employee suffering a work related injury will be tested for drugs and alcohol immediately after the accident.
- Any employee that receives unacceptable drug and alcohol test results will not be allowed to work on a job site or in a company facility.

PERSONAL PROTECTIVE EQUIPMENT POLICY.

The purpose of the PPE Program is to protect visitors and the employees of Pro-Tech Electric from the occupational hazards on the job site by providing protective equipment (PPE). It is our goal to use engineering controls as the primary method for protecting employees. However, when additional protection is necessary, employees will wear PPE provided at no cost to the employee. The scope of this program includes PPE for eye, face, head, foot, and leg and hand protection. If respirators and/or hearing protection is necessary, our Respiratory Program and Hearing Conservation program, respectively, will cover their use.

Shane Cutler is responsible for coordinating the program. They will make certain that hazard assessments are conducted, appropriate PPE is assigned, and affected employees receive training. They will also be in charge of maintaining the documentation for this program.

The Manager should advise Shane Cutler of changes in the requirements for PPE (for example, new procedures, processes requiring PPE, omission of a job or task). Additionally, they should consult with Shane Cutler before purchasing any new PPE.

Each task and/or job will be assessed to determine foot, head, eye, face, and hand hazards present and the proper PPE that should be worn. The assessments will include observation of the following sources of hazards:

- Impact: Flying chips, objects, dirt, particles, collision, motion hazards.
- Penetration: Falling/dropping objects, sharp objects that cut or pierce.
- Compression: Rollover or pinching.
- Chemical: Splashing, burns, fumes.
- Harmful Dust: Dirt, particles, asbestos, lead Light Radiation:
- Welding, cutting, brazing, lasers, furnaces, lights

PPE assessments will be completed for each job and/or task. The Manager conducting the assessment will also survey jobs that are non-routine or periodic. In some cases these assessments may not be completed until the jobs are scheduled.

PPE assessments will be update/evaluated whenever conditions or procedures change. The PPE Assessment will determine which hazards are present, or are likely to be present, which necessitate the use of PPE. The certifier's name, signature, date(s) should be present on the PPE Assessment.

Shane Cutler will ensure that the personal protective equipment in use is appropriate for the identified tasks, provides a level of protection that meets or exceeds the minimum required to protect employees from the hazards, and meets all OSHA/ANSI requirements as specified in OSHA’s PPE standard.

Where applicable, the PPE will be the proper size and fit for the employee. Where a variety of sizes are available, care will be taken to ensure the correct size is selected.

The certification of PPE Training will include the employee name, dates of training and certification subject. This can be documented on the Safety Meeting Minutes signup sheet.
The Manager will make certain that all affected employees receive training on

- What PPE is necessary and why
- How to don, doff, adjust & wear PPE properly
- PPE limitations and capabilities
- PPE care, maintenance and disposal.
- When to turn in worn and/or defective PPE for new PPE.

Each employee will demonstrate that he or she understands the training and will sign the Receipt for PPE Form. The information on the form will include the name of the employee, the date(s) of training, and the type of PPE the employee is certified to wear.

Retraining will be conducted when there are workplace changes, making earlier PPE obsolete, when new PPE is issued, or when the employee demonstrates lack of use, improper use, or insufficient skill or understanding.

Employees will conduct inspection, cleaning, and maintenance of PPE at intervals according to the manufacturer's instructions. They will not use damaged or defective equipment. Employee owned PPE will not be allowed on the job site.

Any employees with questions about the PPE Policy should address them to Shane Cutler.

RISK ASSESSMENT / IDENTIFICATION OF HAZARDS

Pro-Tech Electric has established a formal process for identifying existing or potential hazards in job sites. The Manager will ensure all employees and all sub-contractors are actively involved in the hazard identification process. Hazards found will be reviewed with all employees concerned. Our employees and their elected representatives are encouraged to be involved in the development of our safety and health program goals, objectives, and performance measures as well as the identification and control of hazards in the workplace.

Our Risk Assessment will ensure that hazards discovered are classified/prioritized and addressed based on the risk associated with the task. Our hazard identification process will be used for routine and non-routine activities as well as new processes, changes in operation, products or services

- The Manager shall be trained in good hazard identification techniques, as well as ranking hazards identified based on potential severity.
- The Manager shall conduct a weekly formal inspection of the job site using the proper form documentation. An employee selected at random should accompany the Manager on the inspection.
- The Manager should be informally inspecting the job site as an ongoing process.
- Job site inspection methods and purposes should be a frequent topic in employee and subcontractor safety meetings.

Where feasible, workplace hazards are prevented by effective design of the job. Where it is not feasible to eliminate such hazards, they must be controlled to prevent an unsafe or unhealthy exposure. Once a potential hazard is recognized, the elimination or control of the hazard must be done in a timely manner. These procedures include measures such as the following:

- Maintaining all extension cords and electrical equipment in good working order.
- Ensuring all guards and safety devices are working and in place.
- Ensuring ladders are in good condition.
- Ensuring that scaffolding is properly erected.
- Ensuring that employees, and subcontractor employees, are wearing required PPE.
- Establishing a medical program that provides applicable first aid supplies in the workplace, as well as emergency phone numbers (911).
- Addressing any and all safety hazards with employees.

TRENCHING/SHORING/EXCAVATION POLICY

Pro-Tech Electric has developed and implemented this safety policy to protect employees working in or near trenches and excavations.

An excavation is defined as any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal. A trench is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth of a trench is greater than its width, and the width (measured at the bottom) is not greater than 15 ft. When the term excavation is used, it is meant to include trenches.

Excavation cave-ins occur more often than most people would suspect and very often result in death. Soil is very heavy; its weight varies by composition and moisture content, but it averages about 100 pounds per cubic foot (i.e., a cubic yard = 2,700 pounds). When a person is covered with soil they cannot breathe and cannot move. A person can easily suffocate even if their head is exposed because the weight of the soil prevents their chest muscles from moving.

There are many other hazards associated with excavation work. In addition to cave-ins they include:

- Materials/equipment falling into hole
- Underground utilities
- Being struck by moving equipment
- Asphyxiation
- Explosions
- Falls
- Drowning

COMPETENT PERSON

A competent person must be onsite at all times when personnel are working within or around an excavation of 3 feet or greater. The competent person has many duties including:

- Soil categorization;
- Determination of the protective system to be used; and
- Regular inspections and monitoring of excavation conditions.

A “competent person” is defined as one who is capable of identifying existing and predictable hazards in the work environment and who has authorization to take prompt corrective measures to eliminate them. He/she must be knowledgeable about soil types, required protective systems and OSHA excavation and trenching requirements.

The competent person must perform an inspection of the excavation prior to the start of work each day and as needed throughout the day. An inspection must be made after every rainstorm and other hazard-increasing occurrence, such as heavy equipment coming close to the edge of the excavation. Look for the condition of the excavation walls, water accumulation or seepage, the adequacy of the protective system, and hazardous atmospheres.

SAFETY STARTS AT THE SURFACE

Personnel who operate excavating equipment and other heavy vehicles must be qualified to do so. Stay away from excavating equipment and other heavy vehicles. Many workers have been killed on construction sites when struck by such vehicles. To avoid being struck by falling material, never stand under loads handled by lifting or digging equipment. Excavating equipment and other heavy vehicles must have back-up alarms.

When excavations are exposed to vehicular traffic:

- Each employee on the site must wear a vest made with reflective material or high visibility material
- Appropriate traffic control devices must be put in place. Adhere to procedures specified in DOT Manual on Uniform Traffic Control Devices and/or local requirements.

The location of underground utility installations, such as sewer, telephone, fuel, electric, and water lines must be determined prior to doing any digging. Proceed with caution if the exact location of underground utilities cannot be identified. When they are approached, dig by hand. Protect utilities from damage as may be required.

PROTECTIVE SYSTEMS

The use of a protective system is required for any excavation 5 feet deep or greater, except when the excavation is in stable rock. An excavation less than five (5') feet in depth may also require a protective system. A protective system is not required only if the competent person determines there is no hazard to personnel.

Protective systems must be designed/selected based on soil type:

- Stable Rock: Vertical sides will remain intact while exposed.
- Type A: Includes clay
- Type B: Includes silt
- Type C: Includes granular soils like gravel, sand

The soil type is determined by the competent person, using prescribed methods. Competent persons must be familiar with the definitions of soil types and the manual and visual tests for determining them found in OSHA 1926 Subpart P (1926.650 - .652 and Appendices). All soils are assumed to be Type C in the absence of any other determination by a competent person. Excavations must be protected from cave-ins by one of the following:

- Support (Shoring) Systems Shoring systems are typically built or assembled on site to support the sides of an excavation. They consist of sheeting, cross braces, wales, and uprights. Selection and design involves using tabulated data and can be complex. They can be made from timber or aluminum and can operate hydraulically or pneumatically.
- Shield Systems Shield Systems generally refer to prefabricated steel trench boxes that are placed inside the excavation. The space between the side of excavation and outside of the box must be backfilled. They can be combined with sloping such as in deep holes.
- Sloping or Benching; Sloping means digging the excavation's sides to a safe angle so a cave-in cannot occur. Benching systems excavate the sides to form a series of horizontal levels or steps. The required angle is based upon the soil type:

  Class A: ¾ (horizontal) to 1 (vertical); 53 degrees
  Class B: 1 to 1; 45 degrees
  Class C: 1 ½ to 1; 34 degrees
  Stable Rock: Vertical; 90 degrees

A registered professional engineer must design protective systems for excavations deeper than 20 feet. An employee in a deep and confined footing excavation must wear a harness and a retrieval line.

TRENCH CROSSINGS

Any bridges or walkways put in place to cross over a trench must have standard railings installed to protect employees from falling into the trench.

EGRESS FROM EXCAVATIONS

Excavations of 4 or more feet in depth require safe means of egress. This could be ladders, ramps or stairways. The means of egress must be within 25 feet of lateral travel for employees. There must be a clear path of no more than 25 ft. for a worker to exit the excavation. Ladders must extend a minimum of 36 inches above the ground and ramps must be designed by a competent person.

LOOSE ROCK AND SOIL

Excavated materials must be kept at least 2 feet from the edge of excavation sites. This serves two purposes: it prevents loose rock/soil from falling onto employees and it minimizes the weight on the edge of the excavation. Also, if excavated materials are kept on the edge, a 3 feet trench which does not require a protective system can become a 5 or 6 feet one which does.

HAZARDOUS ATMOSPHERES

On occasion, operations in an excavation can introduce an explosive, flammable, toxic or oxygen deficient atmosphere. Where there is concern that such conditions may exist, tests will be conducted for air contaminants such as oxygen and flammable gases. Atmospheric testing should be completed before entry and periodically for the duration of operations. Contact Shane Cutler to determine the appropriate corrective action. No employee may enter an excavation where a hazardous atmosphere may exist.

WATER ACCUMULATION

Water accumulation is a major cause of excavation collapses. Employees are prohibited from entering an excavation with accumulated water unless adequate protection has been provided.

SHORING SYSTEMS

Protection of Workers in Excavations.

Pro-Tech Electric personnel working in an excavation shall be protected from cave-ins by using either an adequate sloping and benching system or an adequate support or protective system. The only exceptions are when the excavation is made entirely in stable rock or the excavation is less than 4 feet in depth where examination of the ground by the Designated Supervisor provides no indication of a potential cave-in.

Soil and rock deposits are categorized into four types, as follows:

Stable Rock is natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed. It is usually identified by a rock name such as granite or sandstone. Determining whether a deposit is of this type may be difficult unless it is known whether cracks exist and whether or not the cracks run into or away from the excavation.

Type A Soils are cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (tsf) or greater. Examples of Type A cohesive soils are often: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam.

Type B Soils are cohesive soils with an unconfined compressive strength greater than 0.5 tsf but less than 1.5 tsf. Examples of other Type B soils are: angular gravel; silt; silt loam.

Type C Soils are cohesive soils with an unconfined compressive strength of 0.5 tsf or less. Other Type C soils include granular soils such as gravel, sand and loamy sand, submerged soil, soil from which water is freely seeping, and submerged rock that is not stable.

Layered Geological Strata. Where soils are configured in layers, i.e., where a layered geologic structure exists, the soil must be classified on the basis of the soil classification of the weakest soil layer. Each layer may be classified individually if a more stable layer lies below a less stable layer, i.e., where a Type C soil rests on top of stable rock.

Soil Classification. In order to design the most appropriate protective system, the Designated Supervisor shall determine the soil type using a visual test with one or more manual tests. If the soil is subject to vibration or previously disturbed or saturated, a B soil must be downgraded to a C classification.

Visual Test

The entire excavation site including the soil adjacent to the site is observed. During the visual test, the Designated Supervisor shall check for crack-line openings along the failure zone that indicate tension crack and observe the open side of the excavation for indications of layered

geologic structuring. Other conditions to look for are signs of bulging, boiling, or sloughing, as well as signs of surface water seeping from the side of the excavation or from the water table.

Manual Tests

- Thumb Penetration Test. When the thumb is pressed firmly into the soil and penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. This is the **least accurate** of the manual test methods.
- Dry Strength Test. If a sample of dry soil is crumbled freely or with moderate pressure into individual grains it is considered granular, or Type C. Dry soil that falls into clumps that subsequently break into smaller clumps is probably clay in combination with gravel, sand, or silt
- Plasticity or Wet Thread Test. A moist sample of the soil is molded into a ball and then rolled into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B. If the soil sample does break, it is considered Type C. A pocket penetrometer, shearvane, or torvane may also be used to determine the unconfined compression strength of soils

Types of Protective Systems.

The following systems may be used to protect workers from cave-ins in trenches of more than 4 feet deep. The Designated Supervisor should select the method of protection that is most suitable for the particular job site, taking into consideration soil type and surrounding structures. If the soil is not classified, then the excavation must be sloped at an angle not steeper than one and a half horizontal to one vertical.

1. Sloping. Maximum allowable slopes for excavations less than 20 feet deep based on soil type and angle to the horizontal are as follows:

Soil Type Height/Depth Ratio Slope Angle
Type B 1:1 45°
Type C 1½:1 34°

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

2. Benching. There are two types of benching:

- Single. One level or step, not exceeding 4 feet in height.
- b) Multiple. More than one level or step, each not to exceed four feet in height. Benching can be used in conjunction with simple sloping. Benches must be below the maximum allowable slope for that soil type. A ten-foot deep trench in Type B soil must be benched back 10 feet in each direction with the maximum of a 45-degree angle.

Benching is not permitted in Type C soil.

3. Shoring. Shoring is used when the location or depth of the trench makes sloping back to the maximum allowable slope impractical. There are two basic types of shoring:

    - Timber. The Designated Supervisor should use the information in the tables of 29 CFR 1926 Subpart P Appendix C - Timber Shoring for Trenches (see OSHA web site at http://www.osha.gov). Use the chart for oak timber. The members of the shoring system that are to be selected using the tables are the cross braces, the uprights, and the wales where wales are required. The Designated Supervisor shall select the size and spacing of members using the appropriate table. The selection is based on the depth and width of the trench where the members are to be installed. In most instances, the selection is also based on the horizontal spacing of the cross braces. Where a choice is available, the horizontal spacing of the cross braces must be chosen before the size of any member can be determined.
    - Hydraulic Aluminum Shoring. Hydraulic shoring provides a critical advantage over timber shoring because workers do not have to enter the trench to install them. They are also light enough to be installed by one worker, they are gauge-regulated to ensure even distribution of pressure along the trench line and they can be adopted easily to various trench depth and widths:

    - Hydraulic Shoring Support Systems shall be constructed and used in accordance with all specifications, recommendations and limitations issued by the man-ufacturer. Hydraulic shores must be installed in accordance with the 1926 Subpart P Appendix D - Aluminum Hydraulic Shoring for Trenches (see OSHA web site at http://www.osha.gov).
    - The Designated Supervisor should use the tables in this standard to determine the maximum vertical and horizontal spacing that may be used with various aluminum member sizes and various hydraulic cylinder sizes. All shoring shall be installed from the top down and removed from the bottom up. Hydraulic shoring shall be checked at least once per shift for leaking hoses and/or cylinders, broken connections, cracked nipples, bent bases, and any other damaged or defective parts. The top cylinder of hydraulic shoring shall be no more than two feet from the top edge of the excavation. Two feet of trench may be exposed beneath the bottom of the rail or plywood sheeting, if used.

4. Shielding. Trench boxes are different from shoring because instead of shoring up or otherwise supporting the trench face, they are intended primarily to protect workers from cave-ins. Trench boxes are generally used in open areas, but they may be used in combination with sloping and benching. The Designated Supervisor shall ensure that the following safety measures are taken:

    - Trench boxes shall be inspected for good condition before each use.
    - The excavated area between the outside of the trench box and the face of the trench should be minimized. The space between the trench box and the excavation side must be backfilled to prevent lateral movement of the box.
    - The trench box must extend at least 18 inches above the surrounding area if there is sloping toward the excavation. This can be accomplished by providing a sloped area adjacent to the box.

- Shields may ride two feet above the bottom of the excavation provided they are calculated to support the full depth of the excavation and there is no caving under or behind the shield.
- Any modifications to the shields must be approved by the manufacturer.
- Workers must enter and leave the shield in a protected manner, such as by a ladder. Workers may not remain in the shield while it is being moved.

5. Protective Methods Using Other Tabulated Data. Other tabulated data, such as tables and charts, may be selected for the design of sloping, benching, shoring, or shielding systems. The tabulated data used must be written and include the following:

- Identification of the factors that affect the selection of a protective system
- Identification of the limits of use of the data
- Information needed by the user to make a correct selection of a protective system from the data
- At least one copy of the tabulated data which identifies the Registered Professional Engineer who approved the data shall be maintained at the job site during construction of the protective system.

6. Design by a Registered Professional Engineer. Sloping, benching, shoring and shielding systems may be designed by a Registered Professional Engineer. The design shall be written and shall include the following:

- A plan indicating the sizes, types, and configurations of the materials to be used in the protective system.
- The identity of the Registered Professional Engineer approving the design. At least one copy of the design shall be maintained at the job site during construction of the protective system.

NOTE: All excavations more than 20 feet in depth must be approved by a Registered Professional Engineer.