Corporate Health, Safety & Wellness Plan

CES Consulting, LLC

CORPORATE SAFETY OFFICERS

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I. INTRODUCTION

Purpose

CES Consulting, LLC (CES / Company) is a consulting company which provides services such as project controls, construction management, and construction inspection. CES is also a Class A contractor specializing in heavy highway / roadway construction, traffic signs, roadway lighting, electrical, ITS and traffic signal construction. In the normal course of conducting work operations, CES employees are exposed to hazardous or potentially hazardous situations and conditions.

Due to this potential for exposure to hazards, CES has developed this Corporate Health, Safety & Wellness Program (Safety Program) to establish specific measures taken by all CES employees to protect their health and wellbeing, and to foster the safest possible workplace environment.

Policy

It is the policy of CES to provide a safe and accident free workplace for our employees, subconsultants, subcontractors, and other associates. This policy will be accomplished through the implementation of this Safety Program along with all companion programs. CES places paramount importance on safety in the workplace at all times.

CES will make every reasonable effort to provide practices and equipment which will lead to a safe workplace. Safety education and training will be provided to all employees, as necessary to ensure the safe conduct of their operations.

II. ORGANIZATION AND RESPONSIBILITIES

EVERYONE at CES is a part of the Safety Program, and EVERYONE shares some responsibility for its implementation. The Safety Program includes employees that typically work on construction projects as well as the staff that work in the office (see Exhibits C and D).

This section outlines the basic organization of the program and highlights the responsibilities of participants. This organizational structure has been developed as the best means to implement an effective safety strategy. The effectiveness of this program, however, depends on the AWARENESS, DILIGENCE, and SUPPORT of each Company employee! Through thoughtful consideration of our individual work operations, earnest appreciation for the importance of this program, and due concern for the safety of those around us, each employee can contribute to the safest possible work environment for all.

Principals & Directors

- Provide the means to accomplish this policy as stated above.
- Enforce this policy and require that disciplinary action be taken when willful violations occur.
- Advise all sub-consultants and subcontractors of this policy and make this policy available to them.
- Require all subcontractors to provide a copy of their Health, Safety & Wellness plan. If no plan is available or provided, ensure that the subcontractor complies with the CES Health, Safety & Wellness plan as defined herein.
- Require proper supervision by competent workers for various jobs / trades / crafts and ensure that the requisite training is provided for the designated "competent person".
- Require regular safety inspections of jobs and equipment, review corrective measures with supervisory personnel, and file necessary reports.
- Provide for all accidents to be investigated promptly by the appropriate supervisor with the assistance of the Safety Officer, file necessary reports on each, and correct the cause(s).
- Provide for the prompt care of injuries.

Corporate Safety Officer

The Corporate Safety Officer has the overall responsibility for the administration of this program. Among the Corporate Safety Officer's specific responsibilities are the following:

- Enforcement of the requirements of this Plan
- Maintain complete safety training records for all employees.
- Ensure safety equipment is available, issued, and repaired/replaced as needed.
- Make periodic unannounced inspections of job sites to determine if the Safety Program is being followed.
- Promptly investigate all accidents involving company personnel, vehicles and equipment.
- File the necessary reports on each accident or incident as required.

- Review and make recommendations to Supervisors, Foreman, Superintendents, and Management on accidents and injuries and their prevention.
- Evaluate driver performance and maintain individual driver's records.
- Conduct and arrange for effective safety training.
- Prepare and disseminate safety education materials.
- Implement the Company Substance Abuse Policy.
- Annually review and update this Health, Safety & Wellness Plan or more frequently as needed to ensure compliance with OSHA and other applicable regulations.

Corporate Radiation Safety Officer

The Corporate Radiation Safety Officer (RSO) is a specialist in the area of radiation exposure and safety procedures and aids the Corporate Safety Officer in that area. Duties of the Corporate Radiation Safety Officer (RSO) include training, licensing, monitoring, record keeping, and all compliance regarding CES's use of radioactive source equipment CES's use of radioactive sources is limited to studies using nuclear moisture density gauges. For additional details, reference the CES Radiation Protection Program.

Construction Division Safety Manager

The Construction Division Safety Manager will assist the Corporate Safety Officer by insuring that all construction related activities performed by the CES Construction Division comply with the requirements of the CES Safety Program.

Project Managers / Construction Managers / Job Superintendents Shall:

- Be thoroughly familiar with this policy.
- Observe and enforce this policy and provide for appropriate discipline for willful violations.
- Be completely responsible for on-site Safety and for maintaining safe working conditions in all areas under each supervisor's control.
- Supervise all employees and workers so that safe work practices are followed, and safe conditions are maintained throughout the job, insuring that all Supervisors and Foremen correct unsafe work habits of the workers on each crew.
- Instruct Supervisors and Foremen individually regarding their safety responsibilities.
- Require all subcontractors to adhere to all safety regulations in accordance with this policy, the subcontractor agreement as contractually stipulated, and all pertinent Federal, State and Local standards.
- Review all accidents with Supervisors and Foremen, and see that corrective action is taken promptly.
- Have copies of all Federal, State and Local regulations posted on each job as required.
- Be familiar with the laws pertaining to safety and their basic requirements.
- Conduct a continuing review of the contents of this policy and suggest changes/modifications as appropriate.

Sr. Inspectors / Foremen Shall:

- Be thoroughly familiar with this policy.
- Observe and enforce this policy and provide for appropriate discipline for willful violations according to company disciplinary policy.
- Maintain safe working conditions in all areas under their supervision.
- Instruct all workers in safe work procedures and job safety requirements, follow-up and insist on compliance.
- Make sure all work areas are safe for the workers and check construction sites for conditions, which are likely to cause personal injury or property damage including housekeeping.
- Determine the Personal Protective Equipment needed for each job site and the Hazards associated with each site.
- Correct unsafe work practices of workers.
- Have copies of all Federal, State, and Local regulations posted on each job site.
- Be familiar with the laws pertaining to safety and their basic requirements.
- Discuss safety in personal contacts with workers on every operation.
- Familiarize crew(s) with the safe procedures prior to commencing a new job.
- Instruct new workers in the safe performance of each new duty as it is assigned
- Personally, observe each new operator to ensure satisfactory ability on his or her equipment.
- Conduct weekly toolbox talks recording the meeting by date and forwarding the signature of each employee attending the meeting and return the record to the Safety Officer.
- Promptly investigate and report all accidents, include those involving equipment, regardless of how slight the damage might be to the Safety Officer or Superintendent.
- Ensure that all injuries are cared for properly.
- Make sure before starting construction, as well as during construction, that jobs are properly barricaded, that the proper signs are in place, that personnel have on the required personal protective equipment, and that properly trained flaggers are posted as necessary, protecting the general public as well as our employees.
- Conduct a continuing review of the contents of this policy and suggest changes and modifications as appropriate.

Inspectors / Crew Members Shall:

- Attend all safety meetings held by their job site supervisor.
- Maintain a clean and safe work area.
- Wear all necessary Personal Protective Equipment as required.
- Use all safety equipment provided.
- Report immediately to the Construction Manager / Foreman any unsafe working conditions, defective materials, tools, or equipment.
- Immediately report to the Construction Manager / Foreman any personal injury no matter how minor.
- Become familiar with and follow the Safety Rules of the craft and the Health, Safety and Wellness Plan.

- Lockout and Tagout of service for use any equipment found unsafe for operation.
- Any employee who renders a piece of equipment unsafe for operation due to the removal of parts or safety devices, should make that piece of equipment in-operative, lockout and tagout that piece of equipment, and notify the Company equipment / fleet manager that the equipment is locked out of service.

CES Employees

CES employees are the front line of defense in our quest for total job safety. Their responsibilities include:

- Adherence to ALL CES Safety Policies and Procedures.
- Use of safety equipment in the proper manner whenever required by the work conditions.
- Prompt reporting of any unsafe situations or conditions to their supervisor.
- Prompt reporting of any accidents, illnesses, or "close calls" to the Safety Officer or Manager.
- Immediately report any personal injury no matter how minor.

Subcontractors

All Subcontractors and their personnel are by Contract subject to the CES Safety Program while working on all CES projects and shall be responsible for their acts of omission and commission.

Competent Person

A *competent person* must be appointed on each project. OSHA's definition (1926.32(f), states a competent person is "one who is capable of identifying existing and predictable hazards in surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them."

III. SANCTIONS

Any violation of the CES Safety Program, or any of the companion programs, shall carry the following MINIMUM disciplinary actions:

FIRST OFFENSE -Verbal Warning and proper instruction pertaining to the specific safety violation.

SECOND OFFENSE -Written warning with a copy in employee's personnel file

THIRD OFFENSE -Written warning with a copy in personnel file and days off without pay.

FOURTH OFFENSE -Dismissal from employment

These disciplinary actions are the **MINIMUM** actions which may be taken. However, the Company maintains the right to increase the level of action up to and including dismissal if the willfulness or seriousness of the offense warrants increased sanctions.

Section 1 General Training & Safe Practices

CES is committed to instructing all employees in safe and healthful work practices. Awareness of potential hazards, as well as knowledge of how to control them, is critical to maintaining a safe and healthful work environment and preventing injuries. To achieve this goal, we will provide training to each employee on general safety issues and safety procedures specific to that employee's work assignment.

Every new employee will be given instruction by the Company Safety Officer, their supervisor, or qualified trainer, in the general safety requirements of their job. Tailgate or toolbox safety meetings will be conducted regularly. All training will be documented and provided to the Corporate Safety Officer for retention purposes.

Training provides the following benefits:

- Makes employees aware of job hazards.
- Teaches employees to perform jobs safely.
- Promotes two-way communication.
- Encourages safety suggestions.
- Creates interest in the safety program.
- Fulfills OSHA and other regulatory requirements.

Employee training will be provided at the following times:

- All new employees will receive a safety orientation their first day on the job.
- All field employees will receive training at tailgate or toolbox safety meetings held at the job site.
- All employees given a new job assignment for which training has not been previously provided will be trained before beginning the new assignment.
- Whenever management believes that additional training is necessary.

Safety communication:

Employees will be kept advised of highlights and changes relating to the safety program. Supervisors, Superintendents and Foreman shall relay changes and improvements regarding the safety program to employees, as appropriate. Employees will be involved in future developments and safety activities by requesting their opinions and comments, as necessary. All employee-initiated safety related suggestions shall be properly answered, either verbally or in writing, by the appropriate level of Management. Unresolved issues shall be referred to the Corporate Safety Officer. All employees are encouraged to bring any safety concerns they may have to the attention of Company Management. CES will not discriminate against any employee for raising safety issues or concerns.

Enforcement of Safety Policies:

Compliance with CES's Corporate Health, Safety and Wellness Plan is mandatory for all employees and shall be considered a condition of employment. The failure of an employee to adhere to safety policies and procedures established by CES can negatively impact the safety and wellbeing of other employees. An unsafe act can threaten not only the health and wellbeing of the employee committing the unsafe act but can also affect the safety of his/her coworkers and/or customers. Accordingly, any employee who violates any of CES's safety policies will be subject to disciplinary action. As in all disciplinary actions, each situation is to be carefully evaluated and investigated. The step taken in the disciplinary process will depend on the severity of the violation, employee history, and regard to safety. Supervisors, Superintendents and Foreman should consult with the Corporate Safety Officer office if there is any question about whether or not disciplinary action is justified. Employees may be terminated immediately for willful or extremely serious violations.

Code of Safe Practices:

CES will maintain a Health, Safety & Wellness Plan conforming to the best practices of organizations of this type. To be successful, such a program must embody the proper attitudes toward injury and illness prevention on the part of management, supervisors, and employees. Safety and health in our business must be a part of every operation. Therefore, CES has established the following Guiding Principles:

- Establish effective management systems and commit the personnel and financial resources necessary to ensure compliance with this program.
- Provide a safe work environment and training for all employees.
- Encourage employees to identify and promptly communicate all emergency and safety related issues to their immediate supervisor or Company Management.
- Conduct our operation efficiently by reducing waste, preventing pollution, and conserving energy.
- Establish and maintain appropriate communications with the owners, employees, customers, neighboring communities, and public officials.

General Safety Rules:

These rules apply to all personnel when entering work areas whether they are an employee of the Company, Sub-Consultant, Subcontractor, or an employee of another agency having a valid reason for being in these areas.

- CES employees shall follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to their immediate supervisor and/or the Corporate/Construction Safety Officer.
- Possession of illegal drugs or alcoholic beverages on Company property or job sites is strictly prohibited.

- No one shall knowingly be permitted to work while the employee's ability or alertness is impaired by fatigue, illness, and prescription of over the counter drugs or other intoxicating substances.
- Employees who are suspected of being under the influence of illegal or intoxicating substances, impaired by fatigue or illness, shall be prohibited from working.
- Horseplay, scuffling, fighting and other acts that tend to have an adverse influence on the safety or wellbeing of the employees are prohibited.
- Gasoline or other flammable liquids shall not be used for cleaning purposes.
- Hard hats, safety vests, and certified work boots and long pants will always be worn on all job sites.
- Athletic style shoes, tennis shoes, open toe shoes and plastic or vinyl shoes are not allowed. No shorts or sweat pants are allowed.
- Read all warning labels and Safety Data Sheets (SDS) before using any chemical.
- Always take precautions to prevent fires which may be started, particularly from oily waste, rags, gasoline, flammable liquids, acetylene torches, improperly installed electrical equipment and trash.
- Proper eye protection must be worn when using hand and power tools.
- Always wear protective clothing suitable for welding or cutting to be done.
- Always wear proper eye protection when welding, brazing, soldering or flame cutting.

Section 2: Vehicle Operation

It is the policy of CES Consulting, LLC that each driver follows safe vehicle backing procedures in conjunction with this policy. All backing accidents are considered preventable. More than 25% of all accidents occurs while the vehicle is operating in reverse. "Backing" and "Back-over" accidents cause an estimated 500 deaths and 15,000 injuries each year. By integrating this policy our assigned drivers will have the knowledge necessary to back vehicles without incident.

Part of every driver's responsibility is to ensure your vehicle is not involved in an accident that could disable the vehicle, cause property damage or injure individuals. Violation of this policy may result in the immediate suspension of driving privileges and may be subject to disciplinary actions.

All drivers must adhere to the following requirements:

- Only authorized employees are permitted to operate Company vehicles.
- Do not let anyone else drive your Company vehicle.
- Company vehicles are to be used for Company business only unless otherwise approved by management
- Drive defensively and obey all traffic and highway laws.
- Always wear your seat belt, whether the driver or the passenger.
- Report all accidents as soon as possible to a supervisor and obtain police reports when applicable.
- All convictions for moving violations must be reported to the Safety Officer within three (3) calendar days, preferably immediately. This includes off-the-job violations.
- All driving records will be reviewed prior to employment, on an annual basis and after any accident or conviction; counseling, training, or disciplinary action will be provided as appropriate up to and including termination.
- Employees must notify the Company within three (3) calendar days if they are charged and/or convicted of an alcohol or drug related criminal violation within or outside the workplace.
- If your driver's license is revoked or expired, you must immediately notify your supervisor and not drive a Company vehicle.
- Employees are **prohibited** from sending, reading, or reviewing text messages and/or e-mails, using the internet, or accessing any other content available on an Electronic Communication Device (ECD) while operating **any motor vehicle**.
- **No ECD's may be used at any time while operating heavy or mobile equipment or at any other times where safety will be compromised.**

Parking of Company Vehicles

- All employees are encouraged to park vehicles such that the vehicle will be driven forward from the parking space whenever possible and practical.
- Employees are encouraged to back vehicles into the parking space or pull forward into a double space so that when leaving the parking space, the car is driven forward.
- When backing any parked vehicle is necessary, drivers are encouraged to walk completely around their vehicle before getting in and then look over their shoulder while backing.
- **Operation of all vehicles shall be in accordance with applicable laws and regulations.**

Operation of Company Heavy Trucks /Equipment

This policy shall apply to all CES Consulting heavy vehicles, machinery or equipment capable of operating in reverse and with an obstructed view to the rear as defined (16VAC25-97-20) (hereafter referred to as "covered vehicles"), whether intended for operation in off-road work zones or over the road transportation or hauling.

No employee shall operate any covered vehicle in reverse unless:

1. The covered vehicle has a reverse signal alarm audible above the surrounding noise level; and
   a. The covered vehicle is operated in reverse only when a designated observer or ground guide signals that it is safe to do so; or
   b. Before operating the covered vehicle in reverse, the driver visually determines that no employee is in the path of the covered vehicle; or
   c. The covered vehicle is equipped with operable video or similar technological capability used by the driver and capable of providing the driver with a full view behind the vehicle

Seatbelt Policy

CES Consulting, LLC has established a policy to require the use of seat belts in all company assets as required by law. Any violation of this policy will subject the employee to disciplinary action. The specific requirements of this policy and any exceptions are detailed in the following paragraphs:

All safety equipment will always be used on all projects, if the equipment is so equipped. **SAFETY BELTS** will be worn in any vehicle underway, including heavy equipment with rollover protection, dump trucks, lowboys and pick-up trucks. Additionally, all personnel will wear safety belts while operating or riding in highway use equipment, whether it is engaged in work on the project. No personnel will be permitted to ride on equipment not equipped with a seat and seat belt.

I. Specific Highway Vehicles:

All vehicles (Automobiles, Pickups, and Trucks) shall be equipped with seat belt assemblies installed at the driver and passenger seats. Each person qualified to drive or who operates a company vehicle on the public roadways shall wear and require all passengers to wear seat belts. Seat belt assemblies must be maintained in good working order and kept clean. They should be inspected daily by the driver for possible cuts in the fabric or loosening at the buckle or anchor brackets.

II. Off-Highway Vehicles:

The Occupational Safety and Health Administration (OSHA), 29 CFR 1926. 601, requires that all motor vehicles that operate within an off-highway jobsite, not open to public traffic, be equipped with seat belt assemblies for the driver and all passengers. Off-highway vehicles are subject to the same requirements as part 1 of this program.

III. Earthmoving Equipment:

The Occupational Safety and Health Administration (OSHA), 29 CFR 1926. 602, requires that scrapers, loaders, crawlers or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment be equipped with seat belt assemblies.

There are only two exceptions noted in the OSHA regulations, which do not require the installation of seat belt assemblies. Equipment which is designed only for standup operation and equipment that does not have rollover protective structures (ROPS).

Note: Seat belt assemblies must be inspected daily by the driver or operator. Vehicles or equipment with damaged or missing seat belts must be reported to the equipment manager for immediate repair or replacement.

Section 3 Job Safety Analysis

Job related injuries and fatalities occur every day in the workplace. These injuries often occur because employees are not trained in proper job procedures or are not aware of the hazards associated the activities they are performing.

One way to prevent workplace injuries is to establish proper job procedures, train all employees in for the tasks they will be performing, and to make them aware of the potential hazards they may encounter each day.

Establishing proper job procedures is one of the benefits of conducting a Job Safety Analysis (JSA), recording each step of the job, identifying existing or potential job hazards (both safety and health related), and determining the best way to perform the job to reduce or eliminate these hazards. This analysis not only identifies the potential risks and hazards but also notes any safety equipment that may be required while performing the task.

CES uses a JSA Daily Activity Plan to identify hazards and to assist with insuring all employees work safely. The JSA is to be completed daily and submitted to the Company Safety Officer.

A Job Safety Analysis is an exercise in detective work. Your goal is to discover the following:

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are other contributing factors?
- How likely is it the identified hazard will occur?

How do I correct or prevent hazards?

- After reviewing your list of hazards with the employee, consider what control methods will eliminate or reduce them. The most effective controls are engineering controls that physically change a machine or work environment to prevent employee exposure to the hazard. The more reliable or less likely a hazard control can be circumvented, the better. If this is not feasible, administrative controls may be appropriate. This may involve changing how employees do their jobs. The last option is Personal Protective Equipment.
- Discuss your recommendations with all employees who perform the job and consider their responses carefully. If you plan to introduce new or modified job procedures, be sure they understand what they are required to do and the reasons for the changes.

Section 4 Personal Protective Equipment

Use of Personal Protective Equipment:

1. Each employee will use protective equipment for the hazard and as required by Federal, State, Local and Company Policy. If a question arises, the employee will ask the Supervisor for guidance on what protective equipment to use and for instructions on the proper use of the equipment.
2. All employees will wear hard hats in areas designated as hard hat areas, or in those areas specified by supervisory personnel.
3. All employees will wear appropriate eye protection when eye injury hazards exist, or as directed by supervisory personnel, and/or as set forth in Federal, State and Local and Company Policy.
4. No cloth shoes such as tennis shoes or shoes resembling tennis shoes are allowed. Substantial work shoes (i.e. ankle high leather boot) in good repair as set forth in Federal, State and Local regulation are required.
5. Hearing protection will be used as directed by Supervisory personnel or as set forth in Federal, State, and Local Policies.
6. Gloves, Protective Clothing, and other protection against airborne hazards will be used as directed by supervisory personnel or as specified by Federal, State, and Local Policy.

I. Eye and Face Protection:

A. It is important that the eye and face PPE be adequate for the hazard, fit snugly, not interfere with your movements, be durable, easy to clean, and capable of being disinfected, and meet ANSI standards. These hazards are likely to be present on a job site:
   - Flying particles.
   - Molten metal.
   - Liquid chemicals.
   - Acids or caustic liquids.
   - Chemical gases or vapors.
   - Light radiation resulting from welding, brazing, or soldering operations.

B. Types of Eye and Face Protection:

   - Safety Glasses (with or without side shields as provided)
   - Goggles
   - Face Shields
   - Welding Helmets
   - Filter Lenses
   - Welding Curtain

II. Respiratory Protection:

A. This personal protective equipment is used to safeguard your respiratory system against the following items. These hazards may be present on a job site.
- Harmful dust
- Fumes
- Gases
- Sprays
- Oxygen deficiency
- Fogs
- Mists
- Smokes
- Vapors

A. Types of Respiratory Protection:
- Class 1: Air-purifying devices include disposal masks, half or full-face masks, gas masks and power air-purifying respirators.
- Class 2: Air supplying devices include supplied-air respirators, self-contained breathing apparatus (SCBA), and Combination of SCBA and supplied-air.
- Class 3: Combination of air-purifying and air-supplying devices.
- Class 4: Self-Contained Breathing Apparatus with positive pressure mode

III. Head Protection:

Head protection shall be used to protect the worker from head injury. Check your hardhat for signs of cracks, penetration or other damage. Do not drill or punch holes in your hardhat to gain ventilation. Do not store your hardhat on the rear window shelf of a vehicle.

These hazards are likely to be present on a job site.
- An injury to the head from falling or flying objects.
- An injury from bumping the head against a fixed or moving object.
- Electrical shock hazards when working near exposed electrical conductors.

IV. Foot Protection:

A. Safety-toe footwear for employees shall meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967Foot protection ensures that injuries from the following events are minimized:
- Injuries from objects falling or rolling over your feet.
- Injuries from objects that could pierce the sole of your shoe or boot.
- Exposure to electrical hazards.
- Chemicals and solvents.
- Temperature extremes.

- Fungal infections caused by wetness.

B. Your work boots should be able to protect your feet from these hazards.
   - Compression from heavy objects such as carts, pipes or rollers that could cause injury.
   - Punctures from stepping on nails, scrap metal or other sharp objects.
   - Impact from heavy materials or tools that could be dropped of your feet

V. Hand Protection:

A. No glove can protect you against all hazards so select the appropriate glove for the job based on the hazard present, how often and how long you will be exposed to the hazard, how much hand and finger movement is needed, the grip pattern needed for the job, and how much of your arm is exposed to the hazard should be considered.

   These hazards are likely to be present on a job site.
   - Harmful substances that can be absorbed into your skin.
   - Materials or processes that could cause severe cuts, lacerations, abrasions or punctures.
   - Chemicals that could irritate your skin or enter your blood stream.
   - Temperature extremes.
   - Irritating substances that could result into dermatitis.

B. Types of Hand Protection:
   - Gloves
   - Finger cots
   - Mitts
   - Hand Pads
   - Sleeves or Forearm cuffs
   - Hand lotions or creams

VI. Hearing Conservation:

A. OSHA requires that workers exposed to 85 decibels for an 8-hour period be placed in a Hearing Conservation Program. As part of our hearing conservation's program, we will:
   - Monitor the noise levels of all equipment and identify workers exposed to problems.
   - Provide hearing protection at no cost.
   - Train employees in the proper use and care of hearing protection.

B. Types of Hearing Protection:
   It is important that all hearing protection be comfortable to wear and fit properly.
   - Disposable ear plugs.
   - Reusable ear plugs.
   - Headband ear plugs.
   - Ear muffs.

Section 5 Injury Reporting

All employees and subcontractors must immediately report all injuries and accidents, regardless of how minor in severity, to the project superintendent and / or the Corporate Safety Manager. Failure to immediately report an injury or accident could result in loss of workers' compensation benefits and disciplinary action up to and including termination.

The Company Safety Manager must approve all treatments at any facility other than those approved.

I. Worker's Compensation

Approved Medical Facilities

In the case of a Workers' Compensation injury, you may be requested to submit to an examination by an approved CES Physician and/or Medical Facility. Should you choose to use your personal physician or medical facility, CES reserves the right to be notified in enough time to have a Company assigned doctor present at the examination. In any workers' compensation case in which the employee request to be treated by the employee's personal physician at a medical facility not approved by CES, the employee will be responsible for complete payment of all medical expenses relating to the service provided by the non-approved facility and/or physician. Any employee who refuses to comply with a reasonable request for examination or refuses to accept the medical services or physician rehabilitation, which the employer elects to furnish, the employee's right to compensation shall be suspended and no compensation shall be payable for the period of the refusal.

NOTE: YOU ARE REQUIRED TO REPORT ALL ON THE JOB ACCIDENTS AND INJURIES IMMEDIATELY TO YOUR SUPERVISOR.

AFTER NORMAL WORK HOURS, REPORT YOUR ACCIDENT TO:
Tripp DeRamus: (703) 980-1190

Section 6 Hazard Communication

The Hazard Communication Program is designed to comply with the Occupational Safety and Health Standard, CFR 1926.59, and the Globally Harmonized System of the classification and labeling of chemicals.

The objective of this program is to inform employees and contractors about hazardous substances used in the work place and their effect on employee health and safety. This will reduce and prevent occupational injuries and illnesses related to chemical exposure by educating employees about work place chemical hazards.

The Hazard Communication Program applies to all work areas where hazardous substances are known to be present, both under normal conditions and in a foreseeable emergency. The Safety Officer has the responsibility for overall coordination of the Hazard Communication Program. Additionally, the Supervisor / Manager has the responsibility to administer and implement the program at Company facilities and job sites.

I. Hazardous Chemicals

OSHA defines a "hazardous chemical" as: "Any chemical which is a physical hazard or a health hazard".

Chemicals with physical hazards include substance for, which there is scientifically valid evidence that it is:

- Combustible
- Compressed gas
- Explosive
- Flammable
- Organic peroxide
- Oxidizer
- Pyrophoric (spontaneously ignite)
- Unstable (reactive)
- Water reactive

Chemicals with health hazards are substance for which there is statistically significant evidence that acute or chronic health effects may occur in exposed employees. Included are chemicals, which are:

- Carcinogens
- Toxic or highly toxic agents
- Reproductive toxins
- Irritants
- Corrosives
- Sensitizers
- Target organ effects

We depend on our suppliers to determine the hazards of their products and to provide hazard information through Safety Data Sheets (SDS's) and container labeling.

II. Hazard Communication Program Guide

CES's written Hazard Communication Program outlines and describes how the following information will be organized and transmitted:

A. List of hazard chemicals known to be present in the workplace.
B. Information on precautionary labels and other forms of warning for known hazardous chemicals in the workplace.
C. Safety Data Sheets for known hazardous substances in the workplace.
D. Methods used to inform employees of the hazards of non-routine work.
E. Methods used to inform contractor employers of any hazardous chemicals to which contractor employees may be exposed.

The Safety Officer provides guidance for developing and maintaining the written program.

The Hazard Communication Program is available for review by all employees upon request to their Supervisor.

III. Chemical Inventory List

The Safety Officer has the responsibility to provide and maintain an inventory list of known chemicals in the workplace. The Safety Officer should approve any changes to the inventory list.

The chemical inventory list is available to employees during their work shift and can be found at all facilities, with crew foremen/superintendents, and at the main office.

Employees who have questions about the chemical inventory list should contact their immediate supervisor.

IV. Labels and Warnings

A. **Containers**: Manufacturers, distributors, and jobbers provide labels, tags or other markings for containers of hazardous substances. All Managers, Sr. Inspectors and Foremen have the responsibility to ensure that all known hazardous chemical containers present in the workplace display, in English, a precautionary label stating:

   - Identity of the hazardous substance(s)
   - Appropriate hazard warning(s)

   All labels on incoming chemicals must not be defaced in any way. The observation or detection of defaced labels must be immediately reported to your supervisor, so an appropriate label(s) can be applied.

B. **Storage Tanks**: All vessels, which routinely store bulk chemical products, shall be labeled in the following manner.

- Name of contents (chemical and/or common name)
- Appropriate hazard warning (U.N. ID number and DOT hazard class placard).

The placards shall be placed on all sides of the tank, which are visible from normal viewing points. When necessary, commercially available warning labels and placards will be purchased for use. If no standard commercial label or placard is available, a proper label will be prepared internally. Safety Data Sheets will provide the necessary information for hazard warnings.

C. **Portable Containers**: All portable containers of hazardous substances require labeling. The exception to this policy is that portable containers of hazardous chemicals do not have to be labeled if they contain chemicals transferred from a labeled container and are intended only for the immediate use by and remain in the constant control and possession of the employee who performs the transfer. Employees who have questions about portable container labeling should contact their immediate supervisor.

D. **Piping Systems**: Labeling of chemical piping is not specifically required by the Hazard Communication Standard, but employees must be aware and informed of the contents in pipes. Employees, who have questions about piping systems and/or content hazards, should contact their immediate supervisor.

E. **Update and Review**: The Safety Officer or his designee is responsible for reviewing CES's labeling system annually and updating if necessary. Changes in the labeling system will be transmitted to affected supervisors and employees. Employees who have questions about the labeling and warning system should contact their immediate supervisor or CES's Safety Officer / Manager.

V. Safety Data Sheets

A. **SDS Format**: Safety Data Sheets (SDS's) are written or printed material concerning product hazards, which are prepared and distributed by the manufacturers and distributors. SDS's are written in English and contain the following information:

- The identity of the substance
- Physical and chemical characteristics of the material
- Physical hazards of the material
- Health hazards of the material
- Primary routes of entry

- Exposure limits, Threshold Limit Value (TLV)
- OSHA Permissible Exposure Limit (PEL) or supplier recommended limits
- Carcinogen potential
- Applicable precautions for safe handling and use
- Emergency and first aid procedures
- Date of preparation or latest revision
- Name, address, and telephone number of the manufacturer or responsible party, who can provide additional information.

B. **Obtaining SDS's**: The employee responsible for the purchase of a hazardous substance is responsible for obtaining the SDS's from the supplier. An SDS should be available for all presently known substances used or handled in the company workplace. In the event an SDS is not available, the supplier will be contacted.

C. **Review of SDS's**: The Safety Officer is responsible for reviewing all incoming new data sheets for significant health/safety information. Any new information will be transmitted to the Managers, Sr. Inspectors and Foremen; so appropriate measures can be taken to inform affected employees. If deficiencies exist or additional information is needed concerning SDS's, the manufacturer or supplier will be contacted to obtain necessary information.

D. **Maintenance of SDS Notebooks**: A responsible individual will be named to maintain the SDS's at each location. The SDS's for substances and inventory list is maintained by these individuals in a notebook titled, "Safety Data Sheets". These are accessible to employees during each work shift. If SDS's are not available or new substances are in use, which do not have SDS's; employees should contact their immediate supervisor. The Safety Officer will maintain a master copy of the SDS's and inventory list.

E. **Hazard Determination**: CES relies upon the hazard determination and Safety Data Sheets supplied by the manufacturer or distributor to determine the hazards of all products bought, used or stored by the company. Employees who have questions about Safety Data Sheets should contact their immediate supervisor or Company Safety Officer.

VI. Employee Training Information

Effective employee training and information is the most critical component of the Hazard Communication Program. A properly conducted training program will insure that employees are aware of hazards in the workplace and of appropriate control measures to protect them. Supervisors should coordinate the employee training and education program for their employees through the Company Safety Officer.

Reassigned/Transferred Employees: Employees reassigned or transferred to other work areas will undergo a review of specific hazard training in their new work area. Superintendents are responsible for scheduling and insuring that this

retraining session is conducted by the appropriate Foreman and initiated on the first day of employment in a new work area.

VII. Non-Routine Work

Occasionally employees will be asked to perform non-routine work, which can be defined, as work not normally performed by an employee during the normal course of the job duties.

Examples of non-routine work could be, but is not limited to:

- Start up and phase in of new equipment
- Using chemical substances in a manner different from normal and customary usage.
- Welding and cutting operations
- Encountering asbestos during renovation or demolition
- Breaking and opening closed piping systems
- Using internal combustion engines in confined or enclosed area

The following procedure will be used when employees perform non-routine work:

A. Managers/Supervisors will determine the need for non-routine work and the hazards associated with the work. The Inspector/Foreman can help determine hazards involved.

B. The Inspector/Foreman will train employees performing the non-routine work of the hazards associated with the work and of procedures/permits to follow. The training should be given each time prior to employees performing non-routine work.

Employees share the responsibility by ensuring their immediate supervisor knows that non-routine work will be performed. Employees should contact their supervisor with questions concerning non-routine work.

VIII. Audit

The Hazard Communication Program may be audited as needed by the Safety Officer. The following areas are the minimum standard review items:

- Inventory list current
- SDS's current and available
- New employees trained
- Transferred employees trained
- Training performed when new hazards are introduced
- Written hazard communication program current
- All labels maintained
- Personal protective equipment used properly

Section 7 Controlled Substance Policy

It is the policy of the Company that the possession, sale, consumption or "being under the influence" of alcohol or controlled substances of any type (other than prior approved, prescription drugs for medical purposes) during working hours, which includes lunch and break time, is strictly prohibited and shall be grounds for disciplinary action which may include immediate dismissal. No alcoholic beverages may be brought onto or consumed on Company premises, including company vehicles, except when approved in connection with Company authorized events.

All employees are required at the time of hire, or as needed thereafter (i.e. when given a new prescription or when an existing prescription changes), to note and record with the Company Safety Officer any and all prescription drugs (including over the counter medications) being taken for medical purposes.

A. When and Whom to Test

The Company may test an employee in six (6) instances:

1. Pre-employment testing
2. DOT testing
3. In conjunction with any Company-paid medical exam
4. Reasonable cause testing
5. Post-accident testing
6. Unannounced testing

In addition, employees at work and/or on Company property may be subject to searches for controlled substances and alcohol. Any employee who commits an unlawful act involving any substance covered by this Policy, on or off Company premises, or whose conduct discredits the Company in any way, will be subject to discipline, up to and including dismissal.

This Policy shall be effective January 1, 2019. This Policy may be changed by the Company at any time without notice.

Participating in the benefits as outlined in this Policy does not constitute a contract of employment. Employment and compensation can be terminated with or without notice, at any time, by the employee or the Company.

Guidelines for Employees

The following is intended to be used as a guideline for the implementation of the CES Controlled Substance Policy:

I. When and Whom to Test

The Company shall require controlled substance testing in the following instances:

A. Pre-Employment Testing. It is the policy of the Company to utilize substance abuse screening as a condition of employment, both as a routine part of the employment application process for potential new hires, as well as a continuing condition of employment after hire. All applicants, regardless of the position sought, will consent to controlled substance and alcohol tests as a condition of employment, and all prospective employees, regardless of the position sought, shall be tested. The initial test will be taken by the applicant, and the results will be evaluated by the Company, prior to employment. Any applicant who tests and is confirmed as "positive" will not be hired. At the sole discretion of the Company, an applicant may be conditionally hired pending the results of the initial screening test, which test shall be administered within a time period determined by the Company. Any applicant conditionally hired pending the results of the test shall be terminated if the test results confirm, positive, or if the test is not taken by the time established by the Company.

Any individual who tests positive on the initial screening will be eligible to re-apply for employment or, in the case of a "conditional hire", eligible for re-hire after the expiration of ninety (90) days from the date the positive result was received. Any such individual will again be tested for controlled substances and alcohol. Should such individual's test be negative, he or she will be eligible for employment, but such an employee shall be subject to random employment related testing. Should the individual's test be confirmed positive a second time, he or she shall not be eligible for employment for a period of twelve months from the date of the second positive test.

Previous employees being considered for re-employment will be required to submit to controlled substances screening if they have not been tested by the Company within the previous six (6) months.

B. DOT Testing. Certain employees, who operate equipment or drive large

vehicles, including Regulated Drivers, may be subject to substance abuse and alcohol screening under regulations promulgated by the United States Department of Transportation, or by other federal, state or local governmental agencies. This shall include the "random" testing of all Regulated Drivers. When required by federal, state, or local law, rule, regulation or ordinance, all Regulated Drivers shall be subject to testing on a random basis.

C. Company-Paid Medical Exam. All employees, regardless of job position, submitting to any Company-paid medical exam may be tested.

D. Reasonable Cause Testing. Whenever the Company has reason to believe that an employee is under the influence of alcohol or controlled substances, that employee may be tested. Reasonable cause may be based on, but is not limited to, observable actions that indicate the use of controlled substances or alcohol, such as mood swings, irritability, excessive or unexplained mistakes or accidents, unexplained and frequent absences from work, drowsiness, slurred speech, lack of coordination in walking, staggering, weaving, tremors, smell of alcohol, red eyes, dilated pupils, constant runny nose, or any other type of unusual behavior.

E. Post-Accident Testing. The Company shall require a controlled substances and alcohol test for any employee involved in any on-the-job accident or injury, or any accident involving Company property, vehicles, or equipment whether the employee was at fault. If the accident involves persons or property outside the Company, the Company should consult with council before the employee is tested in order to preserve any confidentiality over the test results.

II. Controlled Substances

The Company will contract with an appropriate agency to provide appropriate controlled substances testing and in-house testing may be performed by the Safety Officer with drug testing devices purchased by the Company. Controlled substances testing may include testing for, but shall not be limited to, the following:

1. Amphetamines
2. Methamphetamines
3. Marijuana
4. Cocaine
5. Opiates

Any positive test(s) may be verified by an alternate method of testing.

A test which reveals the presence of any of the above substances shall be a positive test. Should, at the time of collection, a specimen be determined to be unsuitable for full test sensitivity, or if the specimen is below the acceptable temperature range, the individual will be required to submit another observed

specimen within a reasonable time period. If the second test is not acceptable, it may be considered a "failed" test and subject to the terms and conditions of testing positive.

If an individual tests positive and has listed a valid prescription that confirms the substance for which he or she tested positive, the individual may be required to provide the prescription and a statement from the prescribing party that the individual can adequately and safely perform their current work duties while taking such prescribed medication. The Company will only recognize prescribed medications that are legal in the United States.

III. Where to Test

All appropriate controlled substances test specimens shall be furnished by the employee at a Company approved collection facility, to a certified collection technician designated by the Company, to medical personnel (nurses, medical technicians, physicians, physician's assistants, or other state recognized medical professionals) or to the Safety Officer or his designee. All specimens, other than those tested by the Safety Officer, shall be sent for testing to a laboratory, as chosen by the Company, which has been certified by the U. S. Department of Health and Human Services (HHS). Breath alcohol testing may be conducted at any location by a certified breath alcohol technician.

IV. Disciplinary Action

The results of all controlled substance and alcohol tests will be released to an authorized individual of the Company and will be treated confidentially.

First Offense. When an employee is tested and confirmed positive for the first time, management may, in its sole discretion, decide that it would be appropriate to terminate his or her employment, said termination to be effective immediately. Any employee so terminated shall be ineligible for rehire by the Company for a period of twelve (12) months. If an employee is scheduled for a controlled substance and alcohol test and fails to take it, or otherwise refuses to take any controlled substance or alcohol test, the employee will be terminated and will be ineligible to reapply with the Company for a period of twelve (12) months from the date of refusal.

V. Voluntary Notification by Employees

Should any employee voluntarily notify his or her immediate supervisor or the Human Resources Department of the Company that he or she may have a controlled substance or alcohol abuse problem; no disciplinary action will be taken. Instead, the Company will offer referral to an appropriate counseling service to that employee through an approved Employee Assistance Program. This policy does not apply to an individual who has voluntarily notified the Company of a prior controlled substance or alcohol abuse problem, and/or tested positive in the past. If the employee consistently follows the recommendations and directions made by the counseling services, such

employee will not be terminated for controlled substance or alcohol abuse. Should the employee not consistently follow the recommendations and directions of the counseling services, or if the employee should test and be confirmed positive at any future date, the employee will be immediately terminated.

No employee will be allowed to voluntarily come forward with such notice on the day that the employee is required to take a controlled substance or alcohol test. Any employee admitting to possible controlled substance or alcohol abuse problem at the time of testing will be suspended pending the results of said test. Upon results of the test, the employee will be subject to the terms and conditions set forth above for First Offense or Second Offense, whichever is applicable.

VII. Searches

The Company may conduct searches without notice for controlled substances or alcohol in Company facilities or on Company property. Employees are expected to cooperate in the conducting of such searches, which may be made in the presence of the employee. In addition, searches of employees and their personal property may be conducted when there are reasonable grounds to believe that the employee or employees are in violation of this Policy. An employee's consent to a search is required as a condition of employment and the employee's refusal to consent may result in disciplinary action, including termination, even for a first refusal. Searches of Company facilities and property, including vehicles and equipment, may be conducted at any time and do not have to be based on reasonable suspicion. Searches shall be conducted by an employee or appropriate representative designated by CES.

VIII. Miscellaneous

Nothing in this policy is to be interpreted as a contract or any aspect of a contract of employment with any employee or prospective employee of the Company, nor shall this policy be considered a waiver or limitation of management's prerogative to take any disciplinary action, including discharge. An employee having any questions or concerns regarding this policy may question his/her supervisor or the Company management.

Section 8 Respiratory Protection

CES is committed to providing all necessary personal protective equipment and appropriate training to insure the safety of our employees. The following respiratory protection program has been developed to achieve this commitment. We expect strict adherence to the policies and procedures contained within this program. This program is intended to provide maximum employee protection in accordance with federal guidelines for acceptable compliance. Situations may develop which require job site modifications to this program. Supervisors are expected to take all necessary steps for hazard analysis to ensure employee safety.

A. Selection of Approved Respirator Protection: CES will use only respirators approved by the National Institute for Occupational Safety and Health (NIOSH) and/or the Mine Safety Administration (MSHA). Respirators will be chosen based on the hazards to which employees will be exposed. A competent person will determine the chemical and physical properties of the contaminant, the toxicity, the concentration of the hazardous materials, and the amount of oxygen present when selecting the proper respiratory protection.

B. Physical Fitness Determination for Users: Employees will not be assigned to tasks which require the use of respirators unless a physician has determined that they are physically and psychologically able to perform the work and use the equipment. Medical examinations will be given to determine that the employee is in physical and mental condition to safely wear a respirator. The respirator user's medical status should be reviewed annually. Where practical, the respirator will be assigned to individual workers for their use. Facial hair is not allowed with respirator use.

C. Respirator Training: The user will be instructed and trained in the proper use and maintenance of respirators and their limitations. The workers will be instructed by either the Safety Manager or the immediate supervisor. Every respirator wearer will receive fitting instructions, including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. They will also be instructed in respirator inspections, cleaning and proper storage. The communications requirements during an operation involving respiratory protection will be reviewed with each employee.

D. Respirator Inspection, Cleaning, Repair and Storage: Supervisors and respirator users will be trained on the proper inspection, cleaning, repair and storage procedures for their respirators. All respirator users must inspect their respirators before and after each use. Documentation of the inspection will be maintained and turned into the Safety Officer / Manager. The inspection shall include, but not limited to the following:

1. All rubber and plastic parts checked for deterioration.
2. The face piece, headband, valves, connecting tube, fittings and canisters are in good condition.

3. Check the cleanliness of the respirator.
4. The exhalation valve cover should be removed and checked for signs of dirt, distortion, and cracking or tearing.
5. All respirators must be cleaned and disinfected after each use.
6. Manufacturer's recommendations for replacing chemical cartridges and gas mask canisters are strictly enforced.
7. Mechanical filters are replaced as often as necessary to avoid high resistance to breathing.
8. Respirators will be stored in such a manner to protect the face pieces and exhalation valves from reforming in an abnormal shape.

The Safety Officer / Manager shall make semi-annual audit inspections to validate the documentation on the proper cleaning, repair, and storage of respirators as used by each employee.

E. The "Attendant" in Confined Spaces (AKA: The Buddy System): When an employee enters a confined space, an attendant shall be assigned to stand outside the space to monitor the safety of the operation and assist in the event of an emergency. The attendant must maintain constant communication with the employee while he or she is in the confined space. The attendant must remain alert and undistracted and shall be trained in the following:

1. Recognize the effects of a hazardous substance.
2. Communicate with the entrant at all times. (Use of two-way communication devices when necessary.)
3. Assist with rescue duties.
4. Summon rescue and emergency services.
5. Control access to the confined space.

If the confined space is determined to contain dangerous atmospheres or low levels of oxygen, the attendant will be required to wear respiratory protection, as well. This is to ensure that the attendant/buddy will be protected in the event of an emergency that requires him or her to enter the confined space to rescue/assist the entrant.

F. Personnel Records: All respirator users shall have a physical at the time of employment, which will include respirator use; fit testing, and respiratory training for respiratory protection which will be conducted annually. Records of the physical, fit testing, and training will be maintained for all employees approved and trained to wear respirators.

Section 9 Fire Safety

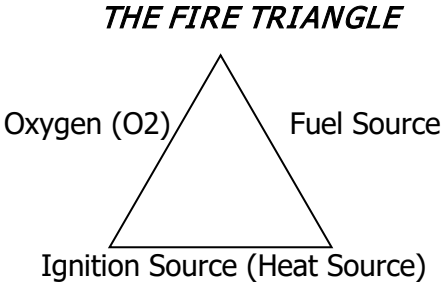
CES has established a fire protection program to be followed throughout all phases of the construction and demolition work, and provide for the fire-fighting equipment as specified in this subpart as fire hazards occur.

This program provides information on fire safety that can help eliminate fire hazards in the workplace and greatly reduce the potential for an actual fire. In addition, this program will review the proper use of a portable fire extinguisher and how to react in case of a fire in the workplace. This program covers four key areas:

A.) The fire elements;
B.) Classes of fire;
C.) Fire prevention and safety tips; and
D.) What to do in case of a fire;
  1.) Proper actions.
  2.) Portable fire extinguisher use.

I. Elements of Combustion:

Fire prevention and safety is based on a clear understanding of how materials ignite. Any fire requires three elements, oxygen (O2), ignition source (heat source), and a fuel source. These elements are sometimes referred to as the fire triangle because each must present before a fire can occur. Therefore, the goal is to keep these elements apart. Since oxygen (O2) is present in nearly all-industrial situations, we must separate or control the ignition (heat) and fuel sources to reduce the chances of fire.



II. Four Classes of Fire:

All fires are classified as either type A, B, C, or D.

1. TYPE A FIRES – result from the ignition of ordinary combustible materials – wood, paper, cloth, rubber, and many plastics.
2. TYPE B FIRES – are flammable liquids. This class includes the ignition of such things as gasoline, oil, grease, tar, oil-based paint, lacquer, and flammable gasses.
3. TYPE C FIRES – involve energized electrical equipment. This includes the ignition of wiring, fuse boxes, circuit breakers, machinery, and appliances.

4. TYPE D FIRES – involve the ignition of combustible metals, such as magnesium.

III. Fire Hazards in the Workplace; Fire Prevention Safety Tips:

A.) Work Site Heating Systems:

1.) Properly supported wiring;
2.) Properly secured covers on all junction, switch, outlet, and panel board boxes;
3.) The use of automatic circuit breakers and over-current relays when possible to guard against electrical overload;
4.) The use of lockout / tagout procedures when testing circuits;
5.) Motors that are kept free of dust, oil or fibers;
6.) Filters are changed on a regular basis; and
7.) Electrical equipment that is maintained and documented on a regular schedule.

B.) Static Electricity:

Controlled by bonding and grounding equipment or through the use of special flooring designed to eliminate static electricity.

C.) Extension Cords:

1.) Use only if necessary;
2.) If extensions cords must be used, they should be constructed of heavy gauge wire and properly rated for the intended use; and
3.) Should be routinely checked for frayed insulation and damaged plugs.

(WARNING) – A cord that is warm to the touch may indicate an electrical overload!!!

D.) Material Handling Devices:

All forklifts and other devices used in material handling should be refueled and serviced outside or in an area away from manufacturing or storage facilities.

E.) Hot Work:

1.) An in-house permit system should be in place for workplace welding and other hot work activities;
2.) The permit system should include:
   A.) Having someone available to operate a fire extinguisher during the job and for 30 minutes after the job is completed; and
   B.) Chaining the gas cylinders used for welding to a cart or wall.
3.) Storing extra cylinders in a separate area away from the welding site.
4.) Floor and wall surfaces should be free of combustibles during welding or cutting procedures.
5.) A properly maintained and dependable smoke-detection system

should be in place for inside hot work areas.

F.) Flammable Liquids Checklist:

Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one gallon, except that this shall not apply to those flammable liquid materials which are highly viscid (extremely hard to pour), which may be used and handled in original shipping containers. For quantities of one gallon or less, only the original container or approved metal safety cans shall be used for storage, use, and handling of flammable liquids. Things to remember:

1.) Flammable liquids must be stored in and dispensed from approved safety containers with vapor-tight, self-closing covers;
2.) Safety cans should be frequently inspected for dents or cracks;
3.) Flame arresters or filters should be in place on safety cans;
4.) Flammable liquids should only be used in areas with adequate ventilation;
5.) Warning signs should be posted when highly volatile and dangerous liquids are in use;
6.) Flammable liquids should be stored in trash-free areas that are not used for other stored purposes;
7.) Smoking cannot be permitted in areas where flammable liquids are used or stored; and
8.) Open flames and sparks must be eliminated from areas where flammable liquids are used.

G.) Good Housekeeping:

1.) All trash including packing materials should be removed frequently and stored in metal containers with tight-fitting lids;
2.) Do not store extra goods in aisles or near fire exits;
3.) Do not stack spill prevention material in flammable liquid areas;
4.) All fire exits must be free of clutter; and
5.) No smoking policies must be strictly enforced to reduce the potential of industrial fires.

IV. What To Do In Case of a Fire:

Knowing how to spot fire hazards in the workplace is only part of an effective fire safety program. In addition, OSHA requires that employers must train their employees in:

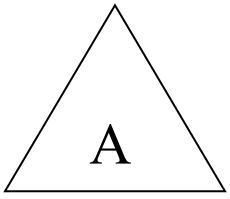
A.) Emergency plans;
B.) Evacuation procedures;
C.) How to use a portable fire extinguisher if it is anticipated that workers may use one;
D.) The location of the fire exits nearest to their work station;
E.) The location of the nearest fire alarm and how to use it;

F.) To test exit doors or other closed doors for heat by lightly touching the door with the backs of their hand. If the door is hot to the touch, workers should find another exit; and

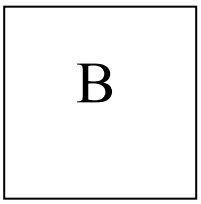
G.) When exiting a smoke-filled space, stay low and close doors behind you to prevent the spread of smoke and to cover your mouth with your hand or a wet cloth when possible.

V. Portable Fire Extinguisher Use:

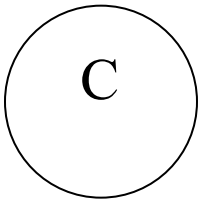
Symbols sometimes found on extinguishers identifying their type and what type of fire they can be applied to:



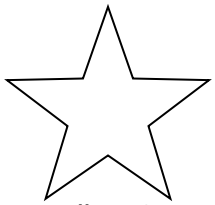
Green Triangle
Type A Extinguisher



Red Square
Type B Extinguisher



Blue Circle
Type C Extinguisher



Yellow Star
Type D Extinguisher

There are other various pictographs, which can be found on extinguishers, which can also represent their type. Here is a list of the descriptions of the other pictographs for which you might find on the labels of extinguishers.

Class A – A pictograph of a trash can and a pile of wood on fire.
Class B – A pictograph of a gas can over the top of puddle of flammable liquid on fire.
Class C – A pictograph of a plug and outlet on fire.
Class D – A pictograph of a steel I-beam burning

Remember: A portable fire extinguisher can be labeled with one or more of these symbols, designating its type. The extinguisher should only be used on the classes of fires for which it is designed / labeled for.

Here are some things to consider before a portable fire extinguisher should be used.

A.) Portable fire extinguishers should only be used by workers who have been trained in their use and are confident about using them;

B.) To ensure the safety of others, be sure that the building is being evacuated and that the fire department has been called;

C.) Use portable fire extinguishers on small, contained fires only;

D.) Make sure that the nearest exit is clear and that you can fight the fire with your back to the exit; and

E.) Make sure that the proper extinguisher is at hand.

(WARNING) – Never use water or an extinguisher marked **"CLASS A FIRES ONLY"** on Class B, C, or D type fires. The type A extinguisher is ***ineffective*** on these type fires and it also ***poses a major threat for bodily injury to the user***. Notify the E/H/S Department immediately if you find any fire extinguisher in the workplace that is any type other than a TYPE A, B, C. This extinguisher is considered to be the most universal type of extinguisher since, if used properly,

can extinguish 3 of the 4 classes of fires. NOTE: The TYPE A, B, C extinguisher is ***ineffective*** on Class D fires, these types of fires require a special type of extinguisher, which contain a specialized extinguishing agent. For a fire of this nature the fire department will most likely have to extinguish. Because of their unique features, most fire extinguishers work in the same manner. This operating technique is referred to as **PASS.**

P – for pull the pin;
A – for aim low (at the base of the fire);
S – for squeeze the lever; and
S – for sweep from side to side.

Here is a step-by-step guide to using a portable fire extinguisher.

1.) To use any portable fire extinguisher, stand at least 6 to 8 feet from the fire then pull the pin. Pulling the pin unlocks the operating lever so you can discharge the extinguisher;
2.) Aim low, pointing the extinguisher nozzle or hose at the base of the fire;
3.) Squeeze the lever below the handle. Squeezing the lever discharges the contents of the extinguisher. When you release the lever, the discharge stops. Some models of extinguishers have a button to press rather than a lever;
4.) Moving carefully toward the fire, keep the extinguisher aimed at the base of the fire and sweep from side to side with the nozzle or hose until the flames appear to be out; and
5.) Watch the area. If the fire starts up again, repeat the **PASS** technique.

Remember – A portable fire extinguisher usually lasts for only 8 to 30 seconds and can only be as effective as the operator.

Section 10 Fall Protection

CES is dedicated to the protection of its employee's from on the job injuries. All employees of CES have the responsibility to work safely on the job. The purpose of this plan is to supplement our existing safety and health program and to ensure that every employee who works for CES recognizes workplace fall hazards and takes the appropriate measures to address those hazards.

This Fall Protection Plan addresses the use of conventional fall protection systems to be used at our job-sites such as, maintenance shops, and field projects. In some applications it may be deemed not feasible or it may possibly create a greater hazard to use conventional fall protection systems. In these cases, alternative fall protection systems may be the safest choice. This plan is designed to enable employees to recognize the fall hazards associated with our jobsite and to establish the safest procedures that are to be followed in order to prevent falls. These include falls to lower levels or through holes and openings in walking/ working surfaces.

Each employee will be trained in these procedures and strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify the Supervisor or Foreman of their concern and have the concern addressed prior to proceeding.

I. Responsibilities:

All fall protection required shall conform to the criteria set forth in 29 CFR 1926.502. The job site supervisor will provide all fall protection equipment and periodically inspect in service equipment. It is the responsibility of the Safety Officer to implement the Fall Protection Plan. The Safety Officer prior to implementation must approve all changes to the plan. Observational safety checks or work operations and the adherence to the safety policy and procedures shall be regularly enforced. It is the responsibility of the employer to ensure that all employees understand and adhere to the procedures of the plan and to follow the instruction of the supervisor.

The crew Supervisor or Foreman is responsible to ensure that proper fall protection is on hand and in good working order prior to starting job requiring the equipment. The Foreman is also responsible for correcting any unsafe practices or conditions immediately.

It is the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or practices that may cause injury to either themselves or any other employees.

II. Requirements:

All employees are required to use Personal Fall Protection when walking/working at heights of six (6) feet or more above the ground or next lower level or around holes that are not protected by a standard guardrail (handrail) or safety net system. This includes but is not limited to working on top of a structure such as a tank or roof. This also includes working at the edge of an excavation six (6) feet or more in depth.

Permanent fall protection shall be provided in accordance with OSHA standards on walking or working surfaces. This is addressed in 29 CFR 1910.21 for railing, toe boards, walkways, stairs, fixed ladders, and floor or wall openings. Where permanent fall protection cannot be used, and employees are exposed to fall hazards alternative methods of fall protection must be utilized.

When employees are assigned tasks that are six (6) feet or more high or may come within six (6) feet of an unguarded edge or floor opening, fall protection shall be provided and used. It shall be sufficient to prevent a person that slips or is bumped from falling to a lower level. The protection shall be provided during all phases of the job while the hazard exists.

The Supervisor or Foreman should evaluate each task assigned to employees for unprotected fall hazards prior to starting the task. Employees must also evaluate their assigned tasks for unprotected fall hazards. When fall hazards are recognized, it should be brought to the attention of the foreman immediately.

The following solutions should be attempted when determining the best method to safeguard employees from fall hazards.

A. Eliminate the Hazard:

Carefully plan the work activity. Through careful planning, it may be possible to complete the work at ground level. This may include partial completion on the ground or lowering equipment to the ground.

Whenever possible, utilize engineering controls to eliminate the hazard. Employ the use of guardrail (handrail) systems at unprotected edges secure covers over holes or other floor openings.

Guardrail systems must meet the following provisions:

1. The top edge height of the top rails shall be 42 inches plus or minus 3 inches above the walking/working level.
2. Midrails shall be installed between the top edge of the guardrail system and the walking/working surface face when there is no wall or toeboard at least 21 inches high.
3. Guardrails shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

4. The ends of all-top rails and midrails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard.

B. Personal Fall Arrest System:

A personal fall arrest system is a system used to stop an employee in a fall from a working level. It consists of an anchorage, connectors, and a 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 and non-locking snaphooks for fall arrest is prohibited. All future purchases of equipment will utilize body harnesses and locking type snaphooks in anticipation of this ruling to ensure compliance.

Body harnesses and lanyards that have been provided are to be used when neither of the previously discussed methods of hazard elimination can be employed. A lanyard is to be attached to an anchorage point meeting the requirements detailed in section IV with other end attached to the D ring on the back of the body harness. This equipment is to be kept in a dry, secure place when not in use and is to be inspected by the foreman and the wearer before and after each use. If the equipment does not meet the inspection requirements listed in section V, it must be replaced prior to use.

The lanyard must be of a maximum length or positioned in a manner that prevents the user from free falling more than six (6) feet or contacting any lower level. Keep the free fall distance to a minimum. Do not forget there is a "tear out length" on a shock-absorbing lanyard. The lanyard shall be a minimum of ½ inch nylon, or equivalent, with a nominal breaking strength of 5,400 pounds (29 CFR 1926.104(d).

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C. Scaffolds:

The use of scaffolds is not authorized without the **"Onsite"** inspection and approval of the Safety Officer / Manager or Superintendent.

D. Ladders:

All portable ladders purchased and used by the company shall be made of aluminum or fiberglass. Any ladders with structural damage shall be disposed of by cutting all the rungs. Ladders other than stepladders shall extend three rungs above the top level where it is placed and it shall be tied off at the top. Climbing or standing is NOT PERMITTED on the top step or second step from the top of the ladder.

III. Anchorages:

Anchorage's used for the attachment of personal fall arrest equipment shall meet the following minimum standards: (29 CFR 1926.502):

1. Shall be independent of any anchorage's being used to support or suspend platforms.

2. Shall be capable of supporting at least 5,000 pounds per employee attached.
3. Shall not be attached to any guardrail system or handrail system.
4. Shall be part of a complete system, which maintains a safety factor of two.
5. Shall be under the supervision of qualified person.
6. Shall be equal to or higher than the anchor point on the safety body harness.

IV. Inspection of Fall Protection Equipment:

1. Lanyard – The entire length of webbing should be inspected for tears, cuts, fraying, or other signs of wear or damage. Sewn termination should be secure, complete and not visibly damaged. Lanyards are to be inspected by beginning at one end and bending a portion (6 to 8 inches) into a U shape between your hands. Check both sides and all straps along their entire length. There is a colored thread running through one end of a shock-absorbing lanyard. Once the lanyard has been used to stop a fall the colored thread will straighten out from its zigzag design. It cannot be reused and must be replaced.
2. Locking Snaphook – The hook must have two independent actions for it to open. If either mechanism is broken, unit is to be replaced. No hook should stick because of dirt or distortion. Hooks should self-close immediately upon releasing and be free of dents, cracks, burrs or distortions.
3. Body Harness – The body harness must be of a size to fit the wearer. It must be cut or excessively worn. All buckles must be in good working order and the holes for the buckles must be worn or oversized.

Section 11 Lockout / Tagout

I. Policy:

This program contains the requirements for practices and procedures to protect employees from the hazards of dangerous energy. It also specifies the acceptable conditions that must exist prior to an employee's ability to work safely within the locked out/tagged out work areas. Only employees trained in this program are authorized to participate in any work associated with lockout/tagout policy. This program shall provide employees with the knowledge, skill, and understanding necessary to enable them to:

- Define Lockout Tagout
- Differentiate between energy sources
- Identify, evaluate, and remove the hazards associated with Lockout Tagout
- Perform their assigned service and maintenance functions.

II. Scope:

This Standard Practice Instruction (SPI) for control of hazardous energy, (Lockout/Tagout) represents a composite of construction industry safe practices for CES. It applies to activities conducted both by Company employees, as well as by contractors and their employees or agents. This SPI is to be considered the minimum acceptable standards for CES policy under normal conditions. More stringent requirements may augment this standard for any situation. If a special need or problem is encountered, consultation with the Safety Officer should be considered before proceeding, keeping in mind that any alternative procedures must be at least as effective as these instructions in providing safe work environment.

III. Application:

This SPI applies to the control of energy during servicing and maintenance of machines and equipment utilized by CES. Normal production of CES's operations are not covered by this standard. Servicing and/or maintenance which take place during normal production operations are covered only if:

- An employee is required to remove or bypass a guard or other safety device; or
- An employee is required to place any part of his/her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed or where an associated danger zone exists during a machine operating cycle.

IV. Training, Retraining and Certification:

Training

The purpose in providing training to employees is to ensure that they understand the purpose and function of the energy control program and that they have the knowledge and skills required for the safe application, usage and removal of energy controls.

Each employee who will use a lockout or tagout system procedure on machines or equipment will receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for isolation and control.

Any employee whose job requires him or her to operate or use a machine or equipment on which servicing or maintenance will be done, or who works in an area where such servicing or maintenance will be done needs to be trained in the purpose and use of energy control procedures.

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

When utilizing the tagout system, employees must be trained on the following limitations of tags:

1. Tags affixed to energy isolating devices are essentially warning devices that do not provide the same physical restraint on those devices that a lock would provide.

2. Any tag so attached to an energy- isolating device must not be removed without authorization of the person attaching it, and it must never be bypassed, ignored or otherwise defeated.

3. Tags must be legible and understandable in order to be effective.

4. Tags must be made of materials, which will withstand environmental conditions encountered in the workplace.

5. Tags can evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

6. When utilized, tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally removed.

Employee Retraining:

Employees must be retrained 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 our energy control procedures.

If determined that there are deviations from or inadequacies in an employee's knowledge or use of the energy control procedures, additional retraining will be provided.
This retraining is designed to reestablish employee proficiency and introduce new or revised control methods and procedures as necessary.

Certification:

We must certify that employee training has been accomplished and is being kept up-to-date. This certification must contain the employee's name and dates of training. A record of this training will be maintained in the main CES office.

Periodic Inspections:

- Periodically, and at least once per year the Company will conduct inspections of energy control procedures to ensure that procedures and the requirements of law are being followed.

- An employee who is trained to implement the system will perform this inspection, but not one who utilizes the energy control procedure being inspected.

- This inspection will be designed to correct any deviations or inadequacies that are observed.

- Where lockout is used, the employee making the inspection will review with employees utilizing the lockout system their responsibilities under that system.

- Where a tagout system is used, the employee making the inspection will review with employees utilizing the tagout system their responsibilities under that system as well as items covered in the section titled "Employee Retraining".

- Each such inspection shall be certified with the following information:
  - The machine or equipment on which the energy controls procedure was being utilized.
  - The date of inspection.
  - The employees included in the inspection.
  - The person performing the inspection.

Outside Contractors:

When outside personnel are used for lockout/tagout procedures, inform the outside employer of CES's lockout/tagout program. Also learn about the outside employer's

program. Ensure CES employees understand and comply with restrictions and prohibitions of the outside employer's energy control procedures.

Stored Energy:

Following the application of lockout or tagout devices to energy isolation devices, all potentially hazardous stored or residual energy must be relieved, disconnected, restrained or otherwise made safe. If there is a danger that stored energy will re-accumulate to a hazardous level, you must continue to verify isolation until servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

Verification of Isolation:

Before starting work on a machine or equipment, you must verify that the isolation and de-energization of the machine or equipment has been effective.

Release of Lockout/Tagout:

Before removing lockout and tagout devices, inspect the work area to ensure that all nonessential items have been removed and to ensure that machine or equipment components are operationally intact. Make sure all employees have been safely positioned or removed from the scene. Notify all employees that were informed at the beginning of the lockout/tagout procedure that the locks and tags have been removed. Then remove only the locks and/or tags that you attached.

THE LOCKOUT/TAGOUT PROCEDURE:

- **Who May Conduct Lockout/Tagout Procedure:**

  Only employees who have been trained in the type and magnitude of the energy, the hazards of the energy, and the methods or means to control the energy they may encounter when working on a machine or piece of equipment may begin maintenance or other types of work under lockout/tagout procedures.

- **Employee Notification:**

  Before lockout/tagout procedures begin, employees who operate the machine or piece of equipment that will undergo maintenance or those who work in the area around the machine or equipment must be notified that a procedure under lockout/tagout will be performed. Either the Foreman or the personnel who will perform the lockout/tagout may make this notification.

- **Applying Controls:**

  The following procedures must be performed in the order presented.

  1. **Shutdown Preparation:**

Before a machine or piece of equipment is turned off, the employee(s) who will perform the lockout/tagout must have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy to be encountered.

2. **Machine or Equipment Shutdown:**

   The machine or equipment must be shutdown in an orderly fashion in order to avoid any additional or increased hazard(s) to employees as a result of the de-energization.

3. **Machine of Equipment Isolation:**

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

4. **Applying Lockout/Tagout Devices:**

   The persons performing the lockout/tagout must affix a lockout or tagout device to each energy-isolating device. These must be placed in a manner so that they will hold the energy isolating devices in a "safe" or "off" position.

   a. If tagout devices are used, they must clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

   b. If a tag is used in place of a lock or an energy-isolating device that is capable of being locked, the tag must be placed where the lock would have been attached.

   c. If a tag cannot be affixed directly to an energy isolating device, it must be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

Special Circumstances:

Removal of Locks by Others:

If an employee who placed a lock or tag is not available to remove it, the lock may be removed under CES's supervision, provided:

- Specific procedures and training for such removal have been developed; documented and incorporated into CES's energy control program.
- The procedure for removal of the device provides equivalent safety to the removal of the device by the employee who attached it;
- The foreman has verified that the employee who attached the device is not at the facility.
- All reasonable efforts are made to tell the employee that his lock or tag has been removed; and

- The employee has knowledge that his lock or tag has been removed before he resumes work at the facility.

Testing or Positioning Machines and Equipment:

In situations where lockout or tagout devices need to be temporarily removed from the energy isolating devices and the machine or equipment energized to test or position that machine or equipment, the following sequence of procedures must be followed:

- Clear the machine or equipment of tools and other nonessential materials.
- Remove employees from the machine or equipment area.
- Remove the locks and tags.
- Energize and proceed with testing or positioning.
- De-energize all systems.
- Reapply energy and control measures.
- Proceed as with any other lockout/tagout procedures.

Group Lockout/Tagout:

The following specific requirements apply to group lockout or tagout. They are not limiting.

- One employee must take primary responsibility for a set number of employees working under the protection of a group lockout or tagout device.
- The employee must determine the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment.
- If more than one crew, department, etc. is involved an employee must be designated to coordinate the affected work forces and ensure community of protection for all.
- Each employee participating must place a personal lockout or tagout device to the group lockout device, group lock box or other mechanism when he or she begins work. Each employee must remove his own locks or tags when he or she ceases to work on the machine or equipment.

Shifts or Personnel Changes:

Continuity of lockout or tagout protection must be provided including provision for the orderly transfer of lockout or tagout devices between off-going and oncoming employees.

Section 12 Confined Space

This program contains the requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces. It also specifies the acceptable entry conditions that must exist prior to an employee's entry into or ability to work safety within a permit-required confined space. Only employees trained in this program are authorized to participate in any work associated with confined spaces and must be trained in this program prior to work assignment. This program shall provide employees with the knowledge, skill, and understanding necessary to enable them to:

- Define a confined space.
- Differentiate between a confined space and a permit-required confined space.
- Locate confined spaces within the facility or work reporting location.
- Identify, evaluate, and remove the hazards associated with permit-required confined spaces.
- Operate the permit system.
- Perform their assigned function as attendant, authorized entrant, or entry supervisor.

Employees are required to follow the practices and procedures of this program as a condition of employment.

I. Confined Space

A confined space consists of a space that contains all of the following characteristics:

- Is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit;
- Is not designed for continuous employee occupancy.

II. Permit Required Confined Space

A permit-required confined space consists of a confined space that has one or more of the following characteristics:

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

III. Evaluation / Typical Permit Required Confined Space

The employer is required to evaluate the workplace to determine if there are any Permit-Required Confined Spaces. If the workplace contains permit spaces, the employer shall inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces. Listed are typical types of confined spaces encountered at our facilities and work reporting locations. Also included are the potential specific hazards associated with each space and procedures for their removal if they are present.

IV. The Permit System:

Prior to entry into a permit-required confined space the employer shall document that all measures, procedures and practices necessary for safe entry were completed as required by preparing an entry permit. The entry supervisor identified on the permit shall sign the entry permit to authorize entry and verify that all pre-entry procedures were completed properly. The completed permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations were completed.

A. The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit. The entry supervisor shall terminate entry and cancel the entry permit when:

   - The entry operations covered by the entry permit have been completed.
   - A condition that is not allowed under the entry permit arises in or near the permit space.

B. The employer shall retain each canceled entry permit for at least one year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation shall be noted on the permit so that appropriate revisions to the permit space program can be made.

C. The entry permit must at a minimum include the following items:

   - The permit space to be entered.
   - The purpose of the entry.
   - The date and authorized duration of the entry permit.
   - A list of authorized entrants within the permit space to enable the attendant to quickly and accurately determine, for the duration of the permit, which authorized entrants are inside the permit space.
   - The personnel, by name, currently serving as attendants.

- The individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry.
- The hazards of the permit space to be entered.
- The measures used to isolate the permit space and to eliminate or control permit space hazards before entry.
- The acceptable entry conditions.
- The results of initial and periodic atmospheric testing performed, accompanied by the names or initials of the testers and an indication of when the tests were performed.
- The rescue and emergency services that can be summoned and the means for summoning those services.
- The communication procedures used by authorized entrants and attendants to maintain contact during the entry.
- Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided and on hand as necessary.
- Any other information whose inclusion is necessary, given the circumstances of the confined space, in order to ensure employee safety.
- Any additional permits, such as for hot work that has been issued to authorize work in the permit space.

V. Training:

CES shall provide training so that all employees whose work is regulated by this program acquire the knowledge, skills, and understanding necessary for the safe performance of the duties assigned. Training shall be provided to each affected employee before the employee is able to participate in any work associated with confined spaces. Retraining must be provided if there is a change in permit space operations that creates a new hazard and the employees were not previously trained on the new hazard. Retraining must also be provided if the employer has reason to believe that deviations have occurred from the required permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

VI. Duties of Authorized Entrants

- Know the hazards that may be faced during entry of the confined space.
- Recognize the signs or symptoms and consequences of exposure.
- Know how to properly use the necessary equipment provided.
- Communicate with the attendant as necessary to enable the attendant to monitor entrant status. Know how to alert attendants when a hazardous or prohibited condition exists.
- Know how to exit as quickly as possible whenever ordered or alerted to do so.

VII. Duties of Attendants

- Know the hazards that may be faced during entry of the confined space.
- Be aware of the behavioral effects of hazard exposure in authorized entrants.
- Maintains a continuous accurate count/identification of authorized entrants in the permit space.
- Remains outside the permit space during entry until relieved by another attendant.
- Communicates with authorized entrants as necessary to monitor entrant status.
- Monitors activities inside and outside the space to determine if a hazardous or prohibited condition develops.
- Orders authorized entrants to exit if necessary.
- Summon rescue and other emergency services if necessary.
- Restricts access to the permit space. Keep unauthorized persons away from the area. Perform non-entry rescue if necessary.
- Performs no duties that might interfere with their primary duty to monitor and protect the safety of the authorized entrants.

VIII. Duties of Supervisors

- Know the hazards that may be faced during entry of the confined space.
- Verify that all tests have been conducted and procedures and equipment specified by the permit are in place prior to endorsing the permit and allowing entry to begin.
- Terminates the entry and cancels the permit when work is completed or a prohibited condition develops during entry.
- Verifies that rescue services are available and that the method for summoning them is operable.
- Removes unauthorized individuals who attempt or enter the permit space during entry operations.
- Determines when responsibility for permit operation is transferred, and that acceptable entry conditions are continued.

IX. Rescue and Emergency Services

Professional rescue and emergency services are available for all job-sites operated by CES. Employees shall not try to perform any rescues within the confined spaces. Employees should concentrate their efforts to notify the rescue services. If necessary, provide the rescue or treatment facility with the SDS or other information on the permit space that may aid in the treatment of the rescued employee.

X. Outside Contractors

When employees of another company perform work that involves permit space entry, the host employer shall:

- Inform the contractor that the workplace contains permit spaces and that entry into those areas is allowed only through compliance with the permit space program.

- Apprise the contractor on the permit spaces, including the hazards identified and the employer's precautions or procedures implemented for the protection of employees.
- Coordinate joint entry operations with the contractor.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program and any hazards confronted or created in the permit space during entry operations.

XI. Alternative Procedures

Alternative procedures to enter a permit space provided the only hazard posed by the permit space is an actual or potential hazardous atmosphere and continuous forced air ventilation alone can remove the hazard. The employer must develop monitoring and inspection data to document and support that it meets the requirement. If an initial entry of the permit space is necessary to obtain the data required, then it must be done under the full permit-required confined space program procedures. All documentation must be made available to employees who will enter the permit space utilizing the alternative procedures.

A. Once the conditions in the previous paragraph have been met entry may take place after:
   - Any hazards are removed, and it is safe to remove the entrance cover.
   - The entrance cover opening is guarded to prevent an accidental fall through the opening or foreign objects from entering the space.
   - Atmospheric testing has been performed for oxygen content, flammable gases and vapors, and potential toxic air contaminants.
   - No hazardous atmospheric condition may exits while an employee is inside the space.
   - An employee may not enter the space until forced air ventilation has eliminated any hazardous atmosphere.
   - The air supply for the forced air ventilation shall be from a clean source and will continuously ventilate the area to be occupied by employees until all employees have left the space. The atmosphere within the space shall be periodically tested to ensure no accumulation of a hazardous atmosphere.
   - Employees must immediately exit if a hazardous atmosphere is detected during entry and the space must be evaluated to determine how the hazardous atmosphere developed.
   - Prior to any subsequent entry employees must be protected from the hazardous atmosphere.
   - The employer shall provide a written certification available to employees that the pre-entry procedures were performed prior to entry. It must contain the date, the location of the space, and the signature of the employee providing the certification.

Section 13 Electrical Safety

Open junction boxes, damaged extension cords, and temporary wiring set-ups are some of the electrical hazards construction workers face daily. **Any electricity can be DEADLY.**

What are the Hazards of Electricity?

Shock: Electrical currents travel in closed circuits. You get a shock when some part of your body becomes part of an electrical circuit. An electrical current enters the body at one point and exits the body at another. You will get a shock if you touch.

1. Both wires of an electrical circuit.
2. One wire of an energized circuit and ground.
3. A metallic part that is "hot" because it is contacting an energized wire and you are in contact with the ground.

The severity of the shock you receive depends on several factors:

1. How much electric current flows through your body (measure in amperes)?
2. What path the electric current takes through your body.
3. How much time elapses while the body is part of the electric circuit?

The effects of an electrical shock on the body can range from a tingle to immediate cardiac arrest. Low voltage can be just as deadly as high voltage if the body is a part of the circuit longer.

WARNING – LOW VOLTAGE DOES NOT IMPLY LOW HAZARD!!!

Preventing Electrical Accidents:

Protection from electrical hazards is one way to prevent accidents caused by electric current. Protective methods to control electrical hazards include insulation, electrical protective devices, guarding, grounding, personal protective equipment (PPE), and safe work practices. At construction sites, the most common electrical hazard is the ground fault electric shock. Ground fault circuit interrupters (GFCIs) or assured equipment grounding conductor program can eliminate the hazards associated with ground fault electric shock.

The OSHA electrical standard requires:

- GFCIs for receptacle outlets in use and not part of the permanent wiring of the structure.
- An assured equipment grounding conductor program covering all cord sets, receptacles that are not part of the permanent wiring of the structure, and equipment connected by cord and plug that are for use or unused by employees. Although the rules require either of the above safety methods, the best method would be to have both systems going at the same time.

Ground Fault Circuit Interrupters:

Although most portable electric tools have an equipment-grounding conductor, and many are double insulated these methods are not 100 percent safe. A grounding wire could break, or a cord could become defective. Using a GFCI overcomes these insulation problems. A GFCI is a fast-acting circuit breaker that senses small imbalances in the circuit caused by current leakage to ground and, in a fraction of a second, shuts off the electricity. Although the GFCI does not protect you from line-to line hazards (holding two hot or one hot and one neutral wire), it does provide protection against the most common form of electrical shock hazard, the ground fault.

A. <u>Assured Equipment Grounding Conductor Program:</u>

The assured equipment-grounding program is an inspection program covering:

1. All cord sets (extension cords).
2. Receptacles that are not a part of the permanent wiring of the structure.
3. Equipment connected by cord and plug that is available for use by employees.

This inspection program includes electrical equipment that must be visually inspected for damage or defects before each day's use. Any damaged or defective equipment must not be used until repaired. Under this program, OSHA requires the following two tests to be performed before the first use of new equipment, after suspected damage to equipment, and at three-month intervals:

1. A continuity test to ensure that the equipment ground conductor is electrically continuous. The test must be performed on receptacles that are not part of the permanent wiring of the building or structure, on all cord sets, and on all cord-and-plug-connected equipment that is required to be grounded.

2. A test to ensure that the equipment grounding conductor is connected to its proper terminal. This test must be performed on receptacles and plugs.

B. Intervals:

Even if your employer has assured equipment grounding conductor program, it is in your best interest to check your equipment for insulation breakdown. Check for exposed wires, scuffed insulation on extension cords, for wires wearing through, and broken or exposed wiring. OSHA has established specific standards for the insulation that covers electrical conductors. The insulation must be suitable for the voltage and conditions under which the item will be used such as temperature, moisture level, and fumes. You can also wear insulation – non-conductive gloves and non-conductive shoes. Non-conducting coatings on tool handles also aid in insulating from electrical shock.

C. Circuit Protective Devices:

Circuit protective devices, including fuses, breakers, and ground-fault circuit-interrupters (GFCIs), are critically important to electrical safety. These devices are designed to automatically limit or shut off the flow of electricity in the event of a ground-fault, overload, or short circuit in a wiring system. Fuses and circuit breakers are over-current devices that are placed in circuits to monitor the amount of current that the circuit will carry. They automatically open or break the circuit when the amount of current flow becomes excessive and therefore unsafe. Fuses and circuit breakers are used to protect conductors and equipment. They prevent overheating of wires and components that might otherwise create hazards for workers. They also open the circuit under certain hazardous ground-fault conditions. However, the only electrical protective devise whose sole purpose is to protect people is the ground-fault circuit-interrupter. The GFCI is not an over current device. It senses an imbalance in the current flow over the normal path and opens the circuit.

D. Guarding:

Any live parts of electrical equipment operating at 50 volts or more must be guarded to avoid accidental contact. This protection can be accomplished by installing equipment.

1. In a room, enclosure, or vault.
2. Behind substantial screens, cages or partitions.
3. On a balcony, platform, or elevated gallery area.
4. At least eight feet above the floor of a work area.

Any entrance to an area containing live parts of electrical equipment must be marked with warning signs. These signs should forbid entrance except by qualified persons.

E. <u>Grounding</u>:

Grounding is required to protect you from electrical shock, safeguard against fire, and protect against damage to electrical equipment. There are two kinds of grounding.

1. Electrical circuit or system grounding accomplished when one conductor of the circuit is intentionally connected to earth. This protects the circuit if lightning strikes or other high voltage contact occurs. Grounding a system also stabilizes the voltage in the system so expected voltage levels are not exceeded under normal conditions.
2. Electrical equipment grounding occurs when the equipment grounding conductor provides for dangerous fault current to return to the system ground at the supply source of the circuit should the insulation fail.

When electrical equipment is grounded, a low-resistance path is intentionally created to the earth. This path has enough current-carrying capacity to prevent any buildup of voltages in the equipment. Grounding does not guarantee that you will never receive a shock. Be sure any equipment you work on is properly grounded and that you do not defeat grounding devices (such as the grounded plugs of portable power equipment).

Section 14 Excavations & Trenching

Protection of Employees in Excavations

Each employee in an excavation shall be protected from cave-ins by an adequate protective system except when:

- excavations are made entirely in stable rock or
- excavations are less than 5 feet (1.52 m) in depth and examination of the ground by a competent person provides no indication of potential cave-in.

Inspections

Daily inspection of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation, which could result in possible cave-in's, indications of failure of protective system, hazardous atmospheres, or other hazardous conditions. The competent person, prior to the start of an excavation, shall conduct inspections before work begins and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.

Protection from Objects and Equipment

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

Means of Egress from Excavations

A stairway, ladder, ramp or other safe means of egress shall be in trench excavations that are 4 feet or more in depth to require no more than 25 feet (7.62 m) of lateral travel for employees.

Setback Rule:

Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or using retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

INTENT:

The intent of this standard is two-fold, by requiring excavated material (spoils) and equipment to be set back 2 feet. It accomplishes the following:

- It decreases the risk of spoils or equipment from rolling back into the excavation on top of employees; and
- It reduces superimposed loads on the face of the excavation, which possibly could contribute to a cave-in. If the superimposed load of the spoils has been considered in the design of the protection system, the spoils may be placed at the face of the excavation if they are retained by a sufficient device/operation such as barricading or wire mesh.

Section 15 Utility Strike Reporting

Damage to or interruption of **EXISTING UNDERGROUND** or **ABOVE GROUND UTILITIES** shall be reported immediately. Overhead and underground electric can result in explosion and electrocution, gas lines can result in explosion and fire, water line breaks can result in back-flows into clean water systems, sewage can result in personal and public health issues and pollute tributaries, Fiber Optic and telephone can affect or disable E-911 systems. Should a strike occur:

1) **FIRST notify 911 or emergency services** (police, fire, and rescue).
2) **SECOND notify the Company Safety Officer.**
3) **THIRD notify the utility owner/operator (as necessary).**
4) **FOURTH notify your immediate Supervisor and the Company office.**
5) **FIFTH contact Miss Utility for a 3-hour re-mark (if necessary)**

IN THE EVENT OF A GAS LINE STRIKE OR LEAK

CALL 911 IMMEDIATELY

Section 16 Office Safety

The leading types of disabling accidents that occur within the office are the result of falls, strains and overexertion's, falling objects, striking against objects, and being caught in or between objects.

General

- Open file cabinets one drawer at a time. Do not overload top drawers.
- Do not leave open file drawers unattended.
- Do not stand on chairs to reach high places. Use a step ladder.
- Keep aisles and walkways clear of tripping hazards.
- Open and close doors slowly.
- Do not lean on the back two legs or wheels of the chair.
- Do not engage in horseplay or practical jokes.
- Ask for help in lifting heavy objects. When lifting, observe proper lifting techniques; life with your legs, keeping your back straight.
- Good housekeeping is essential to prevent accidents. If you spill something on the floor, wipe it up so it does not present a slipping hazard.
- Do not attempt to make repairs on the copiers, call for assistance.
- Turn coffee machines off when not in use.
- Do not store flammable material in the stairwells.
- Do not bring or store flammables in storage rooms.
- Obey the "no smoking" rules. Dispose of smoking materials in proper receptacles located outside the building.
- Report unsafe conditions. Be on the lookout for unsafe and hazardous conditions. Report them to your supervisor immediately.
- Read all safety bulletins and handouts. Obey them! Look and listen to all safety instructions.

Security

- Be careful of entering and exiting the building during non-working hours. Take extra precautions, making sure outside doors are always locked.
- Take notice of strangers lurking around the area and use precautionary measures.

Electrical

- Do not attempt to correct electrical malfunctions.
- Do not overload electrical circuits.
- Extension cords must be of the three-prong type; Do **not** cut off the grounding prong.
- Do not plug a power strip into a power strip
- Do not attempt to make repairs on the microwave ovens.
- Place electrical cords where they not present a tripping hazard.
- Do not use electrical cords that are frayed or cut.
- Disconnect electrical cord by pulling the plug, not the cord.
- Do not store in front of electrical breakers.
- Do not place drinks on electrical office machines

Ergonomics

Adjust the Chair:

- Adjust the height of the chair's seat so that feet rest flat on the floor and arms and hands are comfortably positioned at the keyboard.
- If the chair is too high, use a footrest, this takes pressure off the back of the thighs.
- Armrests should be adjustable and padded.
- Adjust the backrest so that it supports the lower back and fits the curvature of the spine.
- Seat cushions should be firm**,** not soft.

Adjust the Display

- Position the screen to minimize glare and reflections from overhead lights, windows, and other light sources. Place the screen so that windows are not directly in front of or behind the employee when seated.
- Adjust the display so that the top of the screen is slightly below eye level when sitting at the keyboard.
- Set the contrast or brightness of the screen at a comfortable level.

Adjust Lighting

- Adjust blinds to reduce glare.
- Adjust task light or desk lamp to avoid reflections on screen.
- The task lighting should not be less than light at screen.
- Reduce overhead lighting (where possible) by turning off lights or switching to lower wattage bulbs.
- Use indirect or shielded lighting where possible.

Adjust Document Holder

- Position document holder close to screen and at the same level and distance from the eye to avoid constant change of focus.
- Rotate position of document holder to opposite side of screen periodically.

Consider Posture

- The head should be straight and balanced over the spine while looking forward to the screen. Eliminate the flexed-neck position.
- Elbows should be bent at 90 degrees when hands are on keyboard.
- Wrists should be in a neutral position. Utilities wrist rests at the edge of the keyboard for support.
- Feet should rest flat on the floor or a foot rest should be used.
- Utilize a back rest for support in lumbar area of back.

Emergencies

- Know where the exits are in case of an emergency.
- Know where the fire extinguishers are located and how to use them in case of a small fire. Do not attempt to put out an electrical fire with water. Designated office personnel will assure that all employees depart the building and can be accounted for in case of an emergency.
- Do not use the elevator in the event of a fire emergency.
- Know who is qualified to give CPR or first aid in the office, in case the need of their assistance should arise.
- Keep stairways clear for exit in case of an emergency.
- First aid kits are located in the kitchen areas.
- Know the proper emergency numbers to call for assistance. (911)
- Report all injuries to your supervisor.

SUPERVISOR'S ACCIDENT INVESTIGATION FORM

Injured Employee: _____ Report Date: _____

Accident Location: _____ Accident Date: _____

Accident Time: _____ Time Reported: _____

Accident report to: _____

Last Day Worked: _____

Date Returned to Work: _____

Describe Injury: _____

_____

_____

_____

Attending Physician/Hospital: _____

Describe Accident: _____

_____

_____

_____

Witnesses:

Describe damage to equipment or property: _____

_____

_____

State Cause of Accident: _____

Describe Actions to Prevent Reoccurrence:

Supervisor: _____ Date: _____

EMERGENCY CONTINGENCY DATA SHEET

This sheet is for use only on projects which do not need full site safety plans, such as Phase I site assessments, pond inspections or other non-invasive jobs. Please be sure this is readily available at the project site.

Project Name: _____Project Number: _____

Site or Building Name: _____
Address: _____
City, ZIP: _____

Client Contact Name and Phone Number: _____

Fire Emergency Number: _____

Police Emergency Number: _____

Medical Emergency Number: _____

Nearest Hospital Name: _____
Address: _____
Directions to Hospital: _____
_____

Location of Nearest Phone: _____ (and special dialing instructions, if any): _____

Checklist of Required Equipment: Comments

_____ Written Safety Program

_____ Hazard Safety Data Sheets

_____ Material Safety Data Sheets

_____ Fire Extinguisher

_____ First Aid Kit

_____ Personal Protective Equipment

Job Safety Analysis (JSA)

Activity Plan – completed daily for each new activity

CES Consulting, LLC

Date: _____ Job #: _____

Prepared By: _____

Job Name: _____

Competent Persons Review:

Confined space	☐	Yes	☐	No		Scaffolding	☐	Yes	☐	No	
Rigging	☐	Yes	☐	No		Excavations	☐	Yes	☐	No	
Traffic Control	☐	Yes	☐	No		Electrical	☐	Yes	☐	No	
Lead/silica	☐	Yes	☐	No		Signal Person	☐	Yes	☐	No	
Fall Protect	☐	Yes	☐	No		Lift Director	☐	Yes	☐	No	

General Description of activity to be performed:

Task specific - description of small tools, materials, consumables and equipment to be used

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Prior to the start of this activity, please ensure all team members are fit for duty and that you are aware of any work modifications.

Work activity/ Hazard Analysis:	Work with your crew and competent person to develop a safe and efficient plan for completing the work. Remember: Modify your methods to reduce /eliminate hazards or engineer them out, PPE is the last resort.

Activity	Hazards Involved	Solutions to hazards

Use the space below to identify and address additional activities that were added (if any) after the initial review with the crew.

Emergency Planning	Special PPE Needed
Method of initiating an evacuation Cell Phone ☐ Radio ☐ Other: _____ Air Horn ☐	1. _____ 2. _____
Escape Route / Assembly point	3. _____ 4. _____
Emergency Phone Number(s)	5. _____ 6. _____

Reminders - Will you need any of the following?

☐ Yes ☐ No Welding Screens	☐ Yes ☐ No Temporary Power	☐ Yes ☐ No Pre-lift Checklist
☐ Yes ☐ No Safety Harness	☐ Yes ☐ No Barricades	☐ Yes ☐ No Rigging inspection
☐ Yes ☐ No Fire extinguishers	☐ Yes ☐ No Lockouts	☐ Yes ☐ No Welding Leads / outlets
☐ Yes ☐ No Equipment Card	☐ Yes ☐ No Goggles	
☐ Yes ☐ No MSDS review	☐ Yes ☐ No Assured Grounding	
☐ Yes ☐ No Dig Safe	☐ Yes ☐ No Special Licenses	

Hazard(s) identified in planned work activity that need solutions. *Please check yes or no.*
If you check yes, show solutions in the plan

☐ Yes ☐ No Cold/hot weather (outside work)	☐ Yes ☐ No Repetitive motion
☐ Yes ☐ No Do TMs need a place to tie off?	☐ Yes ☐ No Slippery surfaces (oils/water/ice/chemicals)
☐ Yes ☐ No Pinch / crush pints	☐ Yes ☐ No Rotating equipment tools
☐ Yes ☐ No Sharp edges / objects	☐ Yes ☐ No Sharp hand tools
☐ Yes ☐ No Electrical (current)	☐ Yes ☐ No Working over / under others
☐ Yes ☐ No Hot work (welding/ burning/ cutting)	☐ Yes ☐ No Punctures (splinters /tie wire/shavings)
☐ Yes ☐ No Hot pipes / objects	☐ Yes ☐ No Traffic exposure
☐ Yes ☐ No Vibration tools	☐ Yes ☐ No Airborne hazards (dust, silica, lead, welding fumes, other)
☐ Yes ☐ No Chemicals and burn causing substances	
	☐ Yes ☐ No Demolition

Were there lessons learned, problems, or things that need to be changed? ☐ Yes ☐ No

Are there any previous lessons learned that will help you plan this activity? ☐ Yes ☐ No

Possible problems with information / material / coordination / equipment, etc. Please explain

Reviewed by:

Sr. Inspector/Foreman _____ Safety _____ Manager _____