Occupational Health & Safety

SUBCONTRACTOR ACKNOWLEDGMENT OF SAFETY MANUAL

Protecting the health and safety of workers is the primary concern of all of us at HWH. We can meet this goal when we all comply with the comprehensive and effective environmental health and safety plan which has been developed to eliminate unsafe conditions and minimize the impact of hazardous situations.

As a subcontractor of HWH, you have the duty to inform your employees and contractors of the HWH Safety Manual and ensure that these policies are met or exceeded while working on an HWH project. Where the HWH Safety Manual refers to "employee", that should be read to include you as a subcontractor. Follow the link below for the most current version of the HWH Safety Manual.

https://www.hwh1887.com/who-we-are

If you wish to have a hard copy of the HWH Safety Manual or if the link does not open for you, please contact the HWH Safety Department (see contact information below).

ACKNOWLEDGEMENT

By my signature below, I acknowledge that I have received a copy of the HWH Safety Manual. I understand it is my responsibility to implement the measures described in the HWH Safety Manual, to communicate safety expectations to my employees and contractors, and to eliminate any and all hazards as they arise from the work performed daily through the use of the Job Hazard Analysis. I also understand that it is my responsibility to maintain a clean jobsite with all tools and equipment properly stored at the end of each workday.

Company Name: _____

Project Name / Location: _____

Date: _____ Contact Phone: _____

Subcontractor Representative *(print name/title):* _____

Subcontractor Representative *(signature):* _____

All questions with regard to content should be directed to the HWH Safety Department

Contact: *Lance Maness*
Mobile: *903/821-8191*
Desk: *903/783-3686*
Email: *lmaness@hwh1887.com*
Address: *2510 S Church Street*
Paris, Texas 75460

Contact: *Chance Burcham*
Mobile: *903/732-7815*
Desk: *903/783-7112*
Email: *cburcham@hwh1887.com*
Address: *2510 S Church Street*
Paris, Texas 75460

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Go No Go Safety Items for Subcontractors

The following items MUST be satisfied before your work begins:

_____

- ☐ Contractor acknowledgement form signed and returned
- ☐ Hazard Communication Program and Indexed SDS
- ☐ Personal Protective Equipment: hard hat, safety glasses with side shield, vest, safety-toe boots are the minimum
- ☐ Activity Hazard Analysis (AHA) (min. ___ weeks prior to mobilization) *(Federal projects only)*
- ☐ Site-specific written safety plan for scope of work: (i.e. fall protection plan, LOTO, respirator, confined space, excavation/trenching, critical lift etc.) *(As applicable)*
- ☐ Type IAA, IA or I ladders
- ☐ Initial Equipment Inspections
- ☐ Fire Extinguishers
- ☐ Hot work permits for all metal grinding, cutting, torching, and welding.
- ☐ Base pass for every employee (min. ___ day notice) *(Federal Projects only)*
- ☐ Preparatory meeting
- ☐ Safety Orientation
- ☐ Background check and drug screen *(active school sites)*
- ☐ Identification badge *(federal and school project sites)*

Required Safety Documentation

- Job Hazard Analysis
- Equipment Inspection
- Site Safety Meeting

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SAFETY MANUAL

05.05.2023

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Introduction	**Chapter:**	1
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	Revised:	10/01/2020
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	Approved:	Safety Department

Purpose

The purpose of the Safety Manual is to help provide all our employees and subcontractors with the guidance and tools necessary for an injury/incident free workplace.

Scope

Harrison Walker & Harper safety covers multiple areas pertinent to providing an Injury/Incident free workplace.

Safety Policy Statement

Harrison Walker & Harper is totally committed to safety as the first and foremost consideration of The Company. Harrison Walker & Harper believes that an incident and injury free job site is not only desirable, but attainable through safe work practices. Therefore, it is the policy of The Company that employees, subcontractors, site visitors or general public not to be exposed to known or recognized hazards or risks in accordance with accepted standards and practices of the construction industry. Leadership at Harrison Walker & Harper will direct, motivate, and instruct employees in safe and environmentally sound work practices throughout each workday. Employees must comply with all safety rules and instructions and accept personal responsibility for their own protection and consequences of their actions.

Safety Mission Statement

Protecting the health and safety of employees is the primary concern of all of us at The Company. This goal can be met through the development of a comprehensive and effective environmental health and safety plan that endeavors to eliminate unsafe conditions and minimize the impact of hazardous situations. Such a program can benefit the employees, the community, and The Company by reducing illness and injury to all personnel, preventing property damage, and preserving the environment. The Company will make every reasonable effort to promote, create and maintain a safe and healthful environment. This will be realized by adherence to basic safety principles, sound management practices and compliance with applicable federal, state, and local codes, laws, and standards.

Purpose

Define parameters for work execution and risk reduction for all personnel.

Scope

This document contains practices and procedures based on industry practice for risk reduction, OSHA regulatory requirements and other incorporated rules.

Responsibilities

Safety Professionals

Shall provide technical guidance to ensure compliance to all regulatory standards related to basic safe work practices.

Shall deliver required training to include contents of this procedure.

Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning basic safe work practices.

Superintendents

Accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit. While on site, provide feedback to employees concerning safe work practices.

Foremen

Accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit. While on site, provide feedback to employees concerning safe work practices.

Employees

Accountable for their own safety performance and therefore shall comply with this procedure.

Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Subcontractors

Accountable for understanding, communicating and meeting or exceeding the safety standards and expectations described in this manual.

While on site, provide feedback to employees concerning safe work practices.

Detailed Procedure

Safe performance is a condition of employment. It is the responsibility of all company employees to be aware of and comply with all safety policies and procedures.

Employees are held accountable for their actions and the impact their actions have on others. At no time should an employee work, or allow another employee to work unsafely.

Disciplinary action will be enforced as required.

PPE use is required for all perosonnel

Horseplay is strictly prohibited

The possession, use or being under the influence of illegal drugs or alcohol is subject to immediate dismissal

All occupations injuries and illness, regardless of how minor, must be reported IMMEDIATELY

Know what to do in the event of an emergency

Obey all warning signs; this includes barricades

No open fires for any purpose other than work

Smoking in designated areas only

Where permits are required they must be issued before work begins

Tools and equipment will be maintained in accordance with requirements and in good operating condition.

Tools and equipment are to be inspected prior to each use. Damaged o defective tools or equipment are not to be used. The use of home-made tools is prohibited.

All electrical equipment must be grounded to to GFI standards

Mobile equipment is to be operated by authorized personnel only

Employees required to perform work with a potential for fall will have appropriate fall protection

All employee should be familiar with labels and SDS as well as proper storage, use and disposal of materials used in the workplace.

Good housekeeping is everyone's responsibility

Ladders must be appropriate for intended use and correct capacity for the task

All employees must attend weekly safety meetings

Employees must be properly licensed before operating company vehicles.

Only authorized and trained personnel are permitted to use welding, cutting and/or brazing equipment

Competent Person Desgination

The definition of a competent person is as follows:
A competent person for this purpose mean one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

The company or their designee will be responsible for designating competent persons on jobsites. The role of competent persons on the worksite will be multifaceted including roles of inspector, trainer and qualifier or other personnel in the same field.

The following are some examples that will require the oversight of a competent person:
- Perform inspections on, and maintain all lifting equipment
- Supervise erection and inspection of all scaffolding
- Perform and maintain the electrical assured grounding program

Night Work

Based on production requirements or continuous work processes, some work activities may need to be continued during night time hours

- Under no circumstances will night work commence unstructured and not fully controlled / planned
    - Adequate supervision will be provided
- Scaffold erection and structural steel work may be prohibited during night work hours except under emergency type situations.

To reduce the risk associated with night work activities, the following will apply:

- A plan must be created stating clearly the work to be performed, personnel requirements, equipment requirements and safety representation.

- A plan for night work must include, but not limited to:
    - Area
    - Name(s) or supervisor(s) associated with task
    - Signature of safety representative
- The following requirements apply to specific risk reduction for night work activities:
    - All areas required for field work activities and where personnel will have to work will have a measured amount of artificial light equal to 53.81 lux or 10-footcandles minimum
        - Reading should be taken using a light meter

Oxy-Fuel Cutting / Heating – Compressed Gas Cylinders

Personnel engaging in these types of work activities must strictly adhere to the hot work permit system and obtain "Hot Work" permits, if applicable, before work begins.

- Special attention should be placed on the safety aspect of the individual work activities, including fire extinguishers and fire watched where needed.
- Components of the qxy-fuel system are to be inspected prior to beginning work.

Transporting, Moving and Storing Compressed Gas Cylinders

- Valve protection caps myst be in place and secured
- When cylinders are hoisted, they must be secured on a cradle, sling board or pallet, They must never be hoisted or transported by means of magnets or choker slings.
- Cylinders should be moved by tilting and rolling them on their bottom edges. They must never be intentionally dropped, struck or permitted to strike each other violently

- When cylinders are transported y powere vehicles, they must besecured in a vertical position

- Valve protection caps will not be used for lifting cylinders from one vertical position to another. Bars will not be used under valves or vale protection caps to pry cylinders loose when frozen

- Regulator must be removed and valve protection caps put in place when cylinders are moved

- A suitable cylinder cart, chain or other steadying device must be used to keep cylinders from being knocked over while in use.

- When work is finished, cylinders are empty or moved at any time, the valve must be closed and the valve protection cap put in place.

- Compressed gas cylinders must be secured in the upright position at all times.

- Oxygen cylinders in storage must be separated from fuel-gas cylinders or combustible materials, a minimum of 20 feet, or by noncombustible barrier at least 5 feet high having a fire resistance rating of at least one-half hour

- A 10 lb ABC fire extinguisher must be located within 25 feet of storage and use areas

- “No Smoking” signs must be located in the area

- Cylinders must not be stored within 40 feet of an occupied dwelling (office trailer)

Training

All employees shall receive training on the basic safety work practices

Training shall be delivered by a safety representative during new hire orientation .

Refresher training on this procedure shall occur as needed.

Introduction

State and federal law, as well as company policy makes the safety and health of our employees the first consideration in operating our business. Safety and health in our business must be a part of every operation, and every employee's responsibility at all levels. It is the intent of The Company to comply with all laws concerning the operations of the business and the health and safety of our employees and the public. To do this, we must constantly be aware of conditions in all work areas that can produce or lead to injuries. No employee is required to work at a job known to be unsafe or dangerous to his or her health. You cooperation in detecting hazards, reporting dangerous conditions, and controlling workplace hazards is a condition of employment. Inform your supervisor immediately of any situation beyond your ability or authority to correct. Employees will not be disciplined or suffer any retaliation for reporting a safety violation in good faith.

Safety Program Goals

The objective of The Company is a safety and health program that will reduce the number of injuries and illnesses to an absolute minimum, not merely in keeping with, but surpassing the best experience of similar operations by others. Our ultimate goal is zero accidents and injuries.

Safety Rules for All Employees

All employees are expected follow the safe practices and rules contained in this manual and such other rules and practices communicated on the job. All employees must report all unsafe conditions or practices to supervision on the project and the safety department. Basic safety rules are included at the beginning of this manual.

Safety Responsibilities

Safety Department

- Will be responsible for all coordination and primary actions involved with the implementation of this plan.
- Will make frequent reports to the management team concerning the effectiveness of The Company's accident prevention efforts and make specific recommendations for improvement when necessary

- Will consult with project superintendents and company leadership in all aspects of site safety compliance, inspections, training, equipment, OSHA standards and company safety policy.
- Will provide training and other resources necessary for operational compliance to company safety policy and procedure.
- Will maintain and make available necessary personal protective equipment (PPE) required to prevent personal injury.
- Will audit operations for compliance to company policy and this program.

Management

- Will provide means to accomplish the safety policy
- Will accept responsibility to enforce the policy and discharge any employee willfully disregarding it
- Will ensure that subcontractors abide by regulatory rules and requirements and document any violations
- Will provide resources to support this policy such as time to conduct accident investigations, policies to handle injured employees, as well as funding for safety tools and training

Job Superintendents

- Will plan all work with safety as primary consideration
- Will require job hazard analysis for all tasks.
- Will collect and maintain all equipment inspections, JHA's, weekly audits and documentation with copies to be kept on file or electronic database for access by the safety department.
- Will be completely responsible for the safety of all personnel and equipment on the jobsite.
- Will timely report all accidents, incidents, near miss to the safety department.
- Will make available all necessary personal protective equipment, job safety materials and first aid equipment.
- Will instruct foreman on safe practices and conditions on the jobsite.
- Will never require or permit their workers to take chances.
- Will require subcontractors to work safely.

- Will review accidents with foreman, file full reports and see that corrective action is taken immediately on any safety concerns.
- Will ensure that the jobsite has copies of the regulatory requirements as will as a copy of this manual.
- Will be familiar with the laws pertaining to safety along with their basic requirements.
- Will be responsible to implement the site emergency action plan.

Job Foreman

- Will plan all work with safety as primary consideration.
- Perform job hazard analysis (JHA) for safety, occupational health and environmental hazards.
- Will explain job hazard analysis precautions to trades assigned to do the work.
- Will observe and work closely with new employees in the safety performance of their assigned task(s).
- Will see that the entire safety program is carried out at the work level.
- Will ensure that the workers commit no unsafe acts.
- Will ensure that the no unsafe conditions exist in their work area.
- Will see that the necessary protective equipment is on hand and utilized.
- Will instruct workers in safe procedures and job safety requirements.
- Will follow up and insist on compliance with procedures/requirements.
- Will discuss safety with personnel on every operation.
- Will immediately remove any tool or equipment from service that is known to be damaged or broken.
- Will ensure that all injuries are cared for and reported immediately.
- Will investigate accidents, file complete reports and correct the causes immediately.
- Will be familiar with the laws pertaining to safety along with their basic requirements

<u>Employees</u>

- Familiarize themselves with the company safety policy and procedures and comply with them at all times.
- Will never stop being safety conscious on the job as well as off.
- Will analyze their task(s) and their immediate work area to identify existing hazards.
- Will report any incident, accident and near miss immediately no matter how minor.

- Will report and discuss any unsafe workplace situation or act with their Superintendent or foreman.
- Will attend all company sponsored training and safety meetings.
- Will read all posters and warnings.
- Will refrain from any unsafe act that might endanger themselves or fellow workers.
- Will use all safety devices and personal protective equipment provided for protection
- Will watch out for coworkers' safety

Employee Compliance

This written plan contains incentives designed to promote employee participation in the safety program. These incentives are not part of your regular compensation and are not intended to discourage reporting accidents.

To recognize the importance of safety, The Company may award a safety bonus based upon any or all of the following:

- Project performance including compliance identified during safety inspection(s)

The award and time period if and when implemented will be announced by management

Employee Safety Suggestion Program

All employees are encouraged to make safety suggestions. Suggestions may be submitted to the Safety Department. All safety suggestions will be evaluated for merit and possible implementation. Management is the sole judge of the value of safety suggestions and will implement as many of the positive suggestions as possible.

Safety and Health Training

Employee safety training is another requirement of an effective injury and illness prevention program. While The Company believes in skills training, we also emphasize safety training.

New employees will be given a basic safety orientation prior to beginning work. This orientation will be followed up with more extensive, specific training in sessions given throughout each year. Specialized fall protection training will be given before any employee is allowed to work above 6 feet off the ground. Other specialized training will be given when applicable. Each employee is responsible to attend his or her scheduled session.

The new employee safety orientation will include, but not be limited to, the following items:

- Safety policy and programs of The Company as contained in this manual
- Requirements for wearing personal protective equipment
- What to do when an injury occurs
- Requirements to comply with all supervisor's instructions concerning safety
- Safety standards for tools and work procedures
- Explanation of the right to stop for safety concerns on the job
- Hazard Communication – The Right to Know

Safety Meetings

The Company has safety meetings every week. The purpose of the meeting is to convey safety information, provide ongoing training, and answer employee questions. The format of most meetings will be to review the content of the injury prevention program, special work site hazards, serious concealed dangers, and SDS. On the first day of site operation each week and no later than Tuesday the supervisor will meet with site personnel to review company safety policy or procedure, safety related information such as Toolbox Topic, or task specific safety information. The Company requires all employees accept responsibility for their own safety, as well as that of others in the workplace. Subcontractors may participate in site safety meetings or elect to conduct their own. A record of the safety meeting will be made by the site superintendent and include the topic of the training and the signature of all attendees. This record will be submitted to the Safety Manager to document safety training provided to employees and subcontractors.

The safety department will provide safety resource material to all foremen and supervisors for discussion each week. The safety department will also provide information of incident trending that is pertinent for review and discussion.

Safety Audits and Inspections

Jobsites will be inspected routinely by various personnel. Superintendents will make daily, continuous inspections to assure that any potential unsafe conditions are identified and corrected immediately. The Safety & Health Inspector will make routine inspections to assure that any unsafe practice or potential accident-causing conditions are identified and addressed.

Outside inspectors may also inspect for these conditions and may include government officials such as state and local government inspectors, OSHA inspectors and OSHCON consultants as well as insurance providers.

Whenever an inspector detects any unsafe conditions or safety violation, it is the responsibility of the superintendent in charge as well as jobsite employees to stop the work in that area until the hazard can be corrected, or preventive measures implemented so that work may safely proceed.

If unsafe conditions exist that place employees and/or subcontractors in serious jeopardy of life or limb, the jobsite or specific area of work may be shut down by the inspector until such condition can be removed or preventive measure deployed. Should this situation occur during an inspection, every employee on the jobsite will be expected to work to rectify the situation so that work may resume safety and as quickly as possible.

All employees involved in an inspection or audit are expected to be respectful and truthful when answering questions directed to them by the inspector.

Formal reports with any noted deficiencies from the inspection or audit will be sent to the jobsite for prompt response with corrective action documented and completed. All reports and responses will be sent to the Safety Manager for processing and recordkeeping.

If a request for inspection is made by regulatory agency, the safety department must be immediately contacted.

Accident Handling, Reporting, Investigation and Recordkeeping

- Accident Handling - In the event of an accident the following procedure will be enacted:
    - If the result is a minor injury, such as a small scrape or bruise, first aid shall be administered
    - If the result is of more serious nature, the employee taken to the nearest medical facility. Should the accident involve a chemical the SDS must be provided to the medical provider.

- Accident Reporting
    - All accidents no matter how minor must be reported to the Safety department immediately, meaning as soon as the injured employee is tended to. The Safety

department is a resource to provide direction on handling all accidents and injured employees.

- The host facility/client will be notified immediately (within 24 hours) of the incident/accident by the site foreman/superintendent.
- The Safety department will notify operational management of the event.

- The Project Manager/Superintendent Incident Investigation Report and the Employee on the Job Injury Report and revised/reviewed JHA must be completed and submitted to the Safety department within 24 hours of the accident.
  - All information must be complete and accurate to include employee, site, and accident details.
- For accidents that do not result in injury to a company employee but does result in injury to a trade contractor or subcontract employee, the incident must be documented with all of the above reference information and documentation. This documentation must be submitted to The Company Safety department as well as the injured person's employer.
- Accidents resulting in death or the hospitalization of three (3) or more employees will be verbally reported to the OSHA area office and other applicable regulatory agencies within eight (8) hours of the fatality or hospitalizations.

A member of the Safety Department will send out an Incident Notification email to the set distribution of leadership.

- Accident Investigation

  The purpose of an accident investigation is to establish relevant facts as to how and why the accident occurred so that appropriate corrective action can be taken to prevent a recurrence.

  The site supervisor will conduct the investigation with the support of the Safety Manager. Proper equipment will be made available to collect evidence and conduct witness interviews for a thorough investigation. The initial identification and assessment of evidence collected will be completed by the safety manager within 24 hours of the incident/accident. All evidence must be identified referencing the incident/accident name and/or number and must be collected in a way as to preserve in original condition.

  - All evidence will be appropriately identified and referenced in safety reporting documentation.

- All evidence will be submitted to the safety department to review, preservation and security.
- Witness statements will be documented; they will sign and dated by the witness. Statements will be submitted and reviewed as a part of the investigation packet.

The investigation report must be presented to The Company for disclosure to its insurance carrier and for remedial action at the work site. Once a determination of cause has been made by the supervisor and Safety Manager, corrective measures will be discussed and implemented to prevent recurrence.

- Details of the incident/accident, corrective actions taken, and lessons learned will be communicated by the safety department throughout the company via mass e-mail and weekly safety meetings.

Careful evaluation of thorough accident investigations can normally reveal loss control weaknesses, which can be corrected or eliminated.
Employees responsible for incident/accident investigation will be trained in proper investigation techniques.

- Training will be completed before task assigned with refresher training performed a minimum of annually.

- Recordkeeping
  - The Company maintains records of employee training and accident investigation
    - Records will be maintained a minimum of 5 years.
  - Copies of required accident investigation and certification of employee safety training are maintained by the Safety Department.
  - A written report is maintained on each accident, injury or on the job illness for reporting to OSHA.
    - OSHA 300 Log is updated within 7 days of receiving information that an injury occurred.
    - 300 A summary are completed at the end of each calendar year for reporting as required. The summary will be signed by a senior company official.

- A summary of the previous year's reported injuries and illness is posted no later than February 1st to April 30th each year.

Personal Protective Equipment	**Number:**	4
	Issued:	3/27/2015
	Revised:	04.19.2022
	Pages:	1 of 8
	Approved:	Safety Department

Purpose

The Personal Protective Equipment (PPE) procedure is needed to ensure all employees have a clear understanding of what PPE is available for use, the expectations for use of PPE, and what PPE the Company provides.

Policy Statement: The Company requires wearing appropriate PPE in all operations where there is an exposure to hazardous conditions or where the need is indicated for using such equipment to reduce the hazard to the employees. The Company will analyze potential hazards in the workplace and identify the PPE to be used to reduce or eliminate these hazards. Employees shall use PPE in all situations where it has been determined that a particular type of PPE is to be used. There will be no exceptions by virtue of position or rank to this policy.

Scope

The PPE procedure will define requirements for foot, head, hearing, eye and face, hand, respiratory and fall protection. For electrical protective equipment, arc-flash protective equipment, and fall protection, more detailed requirements are included a separate procedure for each.

This procedure will also detail what PPE is provided by the Company.

Detailed Procedure

The company will provide appropriate PPE per the current Dress Code Policy PL-2005. Employee owned PPE is not permitted, unless approval from a safety professional has been obtained prior to use.

High visibility clothing (t-shirt or vest) is required anytime an employee is at a job location. Use the following table as a guide for selection. T-shirts can only be worn in Class 1 locations. Reflective tape provides a higher visibility. Select the garment that provides that the appropriate class for the activity or condition listed. Typically, federal work requires a Class 2 garment, Class 3 if working at night.

Class	Wear For	Nearby Vehicle & Equipment Speed	Example Situations
1	Non-road application where visibility is required	Less than 25 mph (Non-road applications)	1. Warehouse Workers 2. Recreational Non-Road Use 3. Construction Workers
2	When workers are on or near roadways	25 to 50 mph	1. Roadway construction utility workers 2. Survey Crew 3. High Volume Parking Lot Personnel 4. Railway Workers 5. Emergency Response Personnel 6. Accident Site Investigation
3	When workers are in high-risk situations. Allows them to be seen from a distance of 1, 280 feet	Exceeds 50 mph	1. Roadway Construction and utility workers 2. Survey Crews 3. Emergency Response Personnel

After initial PPE issue, the employee will be required to turn in the worn / damaged PPE in order to receive new PPE. This does not apply to the boot policy.

As a minimum, one Job Hazard Analysis (JHA) shall be executed daily at the start of shift. Subsequent JHAs shall be performed prior to starting any tasks not covered by the start of shift JHA. PPE required to mitigate those hazards shall be worn.

See the Electrical Safety procedure for specifics related to electrical work.

Foot Protection

- While on a job site, all employees are required to wear work boots. No low top or tennis shoes will be allowed on construction job sites unless special authorization is given by the Safety Manager for a specific task.

- It is mandatory that all employees using tampers or jack hammers wear metal foot shields while engaged in this or any work activity that subjects the feet to possible injury.

- Steel-toed work boots are required on all project jobsites.

Head Protection

- Hard hats meeting ANSI Z89.2 1971 standards are required on all jobsites.

- All hard hats must be maintained in a sanitary and reliable condition and free from external modifications.

- This includes modification by the application of stickers with the following exceptions only:
    - Identification of site safety representative
    - Orientation / training identification required by the site

    Approved sticker application should be placed at least three quarters of an inch from the edge of the hard hat and areas covered should be kept to a minimum to permit regular inspection.

Hard hats must be worn with the brim forward except when welding or surveying.

The suspension and sweatband for any hard hat that has deteriorated and is in poor condition must be replaced.

Hard hats must be work by all visitors while on jobsites.

6.1 Eye and Face Protection

The Company provides non-prescription safety glasses that meet ANSI Z87.1 1968, which must be worn at all times on construction job sites.

Safety glasses should be the appropriate tint for the environment in which the employee is working. Dark tinted safety glasses should not be worn in work areas when low light or din conditions exist and are prohibited inside of buildings.

Prescription safety glasses will be provided for employees with a current prescription and can be obtained through the Safety Department.

Face shields must be worn when working on or in close proximity to the following work activities (if conditions exist where a face shield does not provide adequate eye protection, goggles, spoggles etc. may be used as an additional means of eye protection):

- Grinding or chipping any material
- Using hand or power wire brushes
- Hauling caustics, acids, or other chemicals where spills / splash hazards exist.
- Operating abrasive blasting equipment
- Operating masonry saws
- Operating abrasive cut off saws
- Operating powder actuated tools
- Any operation that subjects the eyes or facial area to flying particles
- Goggles shall be ventilated to prevent fogging of the lenses as much as practicable.

Welding Specific Protection

Helmets, hoods, and shields shall be made of a material which is an insulator for heat and electricity. Helmets, shields and goggles shall be not readily flammable and shall be capable of withstanding sterilization.

Helmets and shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc.

Helmets shall be provided with filter plates and cover plates designed for easy removal.
All parts shall be constructed of a material which will not readily corrode or discolor the skin.

All glass for lenses shall be tempered, substantially free from striae, air bubbles, waves and other flaws. Except when a lens is ground to provide proper optical correction for defective vision, the front and rear surfaces of lenses and windows shall be smooth and parallel.

Lenses shall bear some permanent distinctive marking by which the source and shade may be readily identified.

Hand Protection

Employees are required to wear appropriate hand protection for the task they are performing when a risk of exposure exists.

Gloves must be worn to protect hands when handling material with sharp edges.

Employees should avoid wearing rings, wristwatches and other jewelry which could get caught and cause injury.

Hearing Protection

Earplugs are required in high noises areas. Generally, if you have to shout to be heard, you need hearing protection.

Disposable earplugs will be available at jobsites and readily accessible to all personnel.

Respiratory Protection

Nuisance dust may be controlled with a general-purpose dust mask.
Appropriate respiratory protection, training and equipment will be provided to mitigate hazards beyond nuisance dust. These hazards include harmful, irritating or nuisance aerosols, vapors or gases.

Life Saving Equipment

Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jacket or buoyant work vests.

Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.

Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.

At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water

Training

All personnel shall receive initial training on this procedure and donning PPE.

All respiratory protection training will be conducted on a job specific basis.

Refresher training on this procedure and donning PPE shall occur annually or when performance dictates more frequent training is needed.

All training shall be delivered by safety professionals to Leadership. Same training shall be delivered by the Leaders to their respective crews.

Appendix

Appendix A – Weld Shade Chart

The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.

Welding operation	Shade No.
Shielded metal-arc welding - 1/16-, 3/32-, 1/8-, 5/32-inch electrodes	10
Gas-shielded arc welding (nonferrous) - 1/16-, 3/32-, 1/8-, 5/32-inch electrodes	11
Gas-shielded arc welding (ferrous) - 1/16-, 3/32-, 1/8-, 5/32-inch electrodes	12
Shielded metal-arc welding:	
3/16-, 7/32-, 1/4-inch electrodes	12
5/16 -, 3/8-inch electrodes	14
Atomic hydrogen welding	10-14
Carbon arc welding	14
Soldering	2
Torch brazing	3 or 4
Light cutting, up to 1 inch	3 or 4
Medium cutting, 1 inch to 6 inches	4 or 5
Heavy cutting, 6 inches and over	5 or 6
Gas welding (light) up to 1/8 inch	4 or 5

Gas welding (medium) 1/8 inch to 1/2 inch ..... | 5 or 6

Gas welding (heavy) 1/2 inch and over ..... | 6 or 8

_____|_____

NOTE: In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation.

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Policy

The Company allows qualified and approved employees to drive on company business. These approved drivers may be issued a company-owned vehicle if the nature of their work or job position indicates a necessity. Other drivers will be reimbursed for business use of personal vehicles according to company guidelines.

Requirements for All Drivers on Company Business

Employees may not drive vehicles on company business or operate powered industrial trucks without being qualified. Their name must also be added to The Company's approved drivers list for insurance purposes.

Employees holding jobs designated as required regular driving for business as a condition of employment must be able to meet the driver approval standards of this policy at all times: a valid driver's license, a clean driving record and must be eligible for any applicable company insurance. Each employee is required to inform their supervisor of any changes that may affect their ability to meet the standards of this policy.

Employees who drive a vehicle on company business must, in addition to the above, exercise due diligence to drive safely and is it is a company vehicle, maintain the security of the vehicle and its contents. Drivers must also make sure that the vehicle meets any company or legal standards for insurance, maintenance, and safety. Employees are responsible for any driving infractions or fines as a result of their driving.

Employees are not permitted, under any circumstances, to operate a company vehicle or personal vehicle for company business when any physical or mental impairment causes the employee to be unable to drive safely. This prohibition includes, but is not limited to, circumstances in which the employee is temporarily unable to operate a vehicle safely or legally because of illness, medication or intoxication or having symptoms of fatigue. Fatigue symptoms include extreme exhausting lasting more than 24 hours, unrefreshing sleep, loss of concentration.

> If symptoms of fatigue are experienced while driving, the operator of the vehicle must pull off the roadway immediately and contact a member of the safety department.

An employee on medication as described above should report it immediately to the Safety Department.

Employees are not permitted to operate while distracted, this include the use of cell phones, adjusting the radio. Employees who are required to be available will be issued hands free options.

Employees must report any accident, theft or damage involving a company vehicle or a personal vehicle used on company business to their supervisor, the yard superintendent and the safety department, regardless of the extent of damage or lack of injuries. Such reports must be made immediately following the incident. Employees are expected to cooperate fully with authorities in the event of an accident.

Seatbelts will be worn at all times and the speed limits observed. If the vehicle used is a van, every passenger must buckle up, there are no exceptions.

During fueling vehicles are to be turned off.

Guidelines for the Use of Company-Owned Vehicles

All company-owned vehicles must be equipped with the following:

- A non-glare rear view mirror
- A left-hand outside rear view mirror
- Seat belts to accommodate all passengers
- Turn signals and horn
- Emergency flashers
- Two windshield wipers
- Back up lights
- 10 lb ABC Fire extinguisher
- Spare tire
- Accident reporting documents
- First aid kit
- Insurance certificate and registration
- Current inspection sticker; and
- License plate

Employees are prohibited from using company vehicles for personal gain or profit.

Any operational problems must be reported promptly to the yard superintendent for correction.

Vehicles are to be cleaned at least weekly in order to maintain a quality conscious, professional image for The Company.

Trash inside truck cabs must be stowed in a litter bag and disposed of daily. Do not allow trash, materials, scraps, etc. to pile up in truck beds. Carry only what is needed and dump or store the rest.

All levels of fluids must be checked on company vehicles during fueling.

When using vehicles to haul a load, the load should be strapped or blocked to prevent shift. Flag material that extends outside of the truck bed and use reflectors on materials transported at night.

A commercial driver's license (CDL) will be required when:

- Operating motorized vehicles in excess of 26,000 pounds
- Transporting hazardous material
- Carrying 16 or more people including the driver

It is the responsibility of the driver to ensure oil and filter changes are made at the frequency recommended by the yard personnel (every 5,000 miles). Annual vehicle inspections are to be scheduled by the driver as well. Tires must be rotated every 10,000 miles. Receipts must be submitted on oil and filter changes and inspections using the current expense report form.

Periodic wax jobs may be scheduled through the yard.

Annual vehicle registrations and insurance certificates will be conducted and provided by the yard and accounting department.

All applicable tolls, parking fees and gas receipts are to be submitted to reimbursement by accounting a minimum of once per month.

If a vehicle is damaged due to abuse of as a result of using it to perform tasks not related to your job, the employee will be required to reimburse The Company for damages.

Guidelines for the Use of Personal Vehicles

Employees must track the actual mileage incurred on their personal vehicle while conducting company business. Mileage will be reimbursed through the travel policy and maintained by the accounting department.

The Company assumes no responsibility for damage or theft of any vehicle or personal property left in the vehicle with on the parking lot or job site.

Tool Trailers

The Company rules for tool trailers are as follows:

- When applicable the operator must make sure trailer brakes are in working order
- All lights must be operable (turn signals, brake lights, back up lights, etc.)
- All trailers must have safety chains and pins in place while traveling
- Chock trailer wheels to prevent movement when parked
- Tool trailer doors must have a positive means of holding when left open so as not to injure employees in the event of windy conditions
- Tire condition must be checked often
- Do not overload trails. Excessive weight can damage the trailers axle.
- Keep tool trailers clean! Have a trash barrel nearby and empty it often
- Tool trailers must have a fire extinguisher and stocked first aid kit
- All clear aisle must be maintained in all tool trailers for easy access to equipment and materials
- All trailers must have stable access steps. Pallets, boxes etc. are not suitable access to tool trailers. Handrails must be provided with 4 or more risers, and steps must be kept uniform in height and depth. If slippery conditions are possible, slip proofing must be utilized.

Job Trailers

The appearance of our office trailers says a lot about the attitude of our company. Trailers must be kept clean and orderly at all times.

- Empty trash containers daily
- Do not store equipment or materials in trailers

- Vacuum as needed to keep dust down
- Use mats during muddy conditions
- Safe access must be provided

All job office trailers must have the following:

- A mounted 20lb B/C fire extinguisher with signage
- Current five-in-one law poster
- The Company policy statements
- Completed The Company HAZCOM Manual with MSDS
- OSHA 1926 Manual
- The Company Safety Manual
- Client Safety Manual (if applicable)
- Emergency Telephone Numbers
- Crane Hand Signals (1926.550)
- OSHA 300 Log (posted Feb. 1st through Apr. 30th only)
- First Aid Log
- Stocked First Aid Kit (with no expired supplies)
- Trained First Aid Attendant List
- Five white visitor hard hats and safety glasses (not to be loaned out to subs)
- Six clear and six dark lens safety glasses for exchange
- Clean drinking water
- Potable water for hand cleaning
- Do not post cartoons, calendars etc. which may be offensive in nature
- Make clear to all personnel and subs on the jobsite that the telephone is for business – Emergency calls only
- No smoking in job/office trailers

Training

All employees who are issued a company vehicle or required to drive on behalf of the company will be trained in the requirements of this program at hire, when issued a vehicle or driving responsibility or if there is a change in the program.

Housekeeping	**Chapter:**	6
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 4
	Approved:	Safety Department

Purpose

The Housekeeping procedure is needed to ensure all employees have a clear understanding of their responsibility for maintaining a clean, organized and hazard free workplace. Improperly stored materials and debris can result in cluttered work areas and exit paths, which poses a life safety hazard.

Policy Statement: The Company believes that housekeeping and safety on the jobsite go hand in hand. Proper housekeeping helps to assure the safety of our employees, subcontractors, clients and visitors.

Scope

The Housekeeping procedure will define requirements for employees to keep their workplace clean.

Definitions

None required.

Reference List

OSHA 1926 Subpart C- General Safety and Health Provisions-1926.25 Housekeeping
OSHA 1926 Subpart F- Fire Protection and Prevention- 1926.151 Fire prevention
OSHA 1926 Subpart H- Materials Handling, Storage, Use, and Disposal- 1926.252 Disposal of waste materials

Responsibilities

Safety Professionals

Shall provide technical guidance to ensure compliance to all regulatory standards related to housekeeping.

Shall deliver required housekeeping training to include contents of this procedure.

Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning housekeeping.

Superintendents

Accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit. While on site, provide feedback to employees concerning housekeeping.

Foremen

Accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit. While on site, provide feedback to employees concerning housekeeping.

Employees

Accountable for their own safety performance and therefore shall comply with this procedure.

Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Detailed Procedure

It is the responsibility of every employee to keep his or her workplace clean as the job progresses. Do not allow trash or scrap to accumulate in your work area.

The following requirements are mandatory on all jobsites:

Nails protruding from lumber must be removed or bent over during the course of the work.

Combustible scrap and debris must be removed at regular intervals and not allowed to accumulate. Wastes must be disposed of at frequent intervals.

Containers must be provided for collection and separation of all refuse. Covers must be provided on containers used for flammable or harmful substances.

Do not use doorways, corridors, or aisles for storage materials.

Do not route of any electrical cords or welding cables through doorways. Use cable trees or sleeves to elevate electrical cords.

If cables or cords must be routed on the floor, trip prevention measures must be used. Prevention measures include tape, cord guards, or cord ramps.

A minimum clear egress width of 28 inches, or the equivalent clear width of the exit door for the space, must be maintained at all times.

Materials must not be stacked within 18 inches of fire sprinkler heads.

Materials must not be stored so that they project into aisles or passageways in a manner that could cause occupants to trip or that could delay an emergency evacuation.

All stored materials must be stacked in stable piles. Material such as pipe that could roll must be chocked or braced to prevent rolling.

Keep fire doors closed at all times.

Keep grass trimmed around the job trailer and jobsite as needed.

Glass containers pose a serious hazard on the job and are strictly prohibited.

General Waste Management

Pre-project planning will include the identification of potential project waste, trash and/or scrap materials by the initial job superintendent and foreman. Ask for assistance if needed. A project specific plan will be developed and address the following:

Type and amount of waste, trash and/or scrap materials.

Dumpster and / or dumping schedules.

Potential environmental impact.

Appropriate handling and storage.

Recycling opportunities shall be used when available. All waste must be segregated by type (i.e. paper, plastic, glass) to allow for recycling when appropriate and available on a specific project.

Training

All project employees shall receive training on the proper handling, storage and disposal of waste, trash and/or scrap during the project orientation phase.

Refresher training on this procedure shall occur as needed.

Tools	**Chapter:**	7
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 7
	Approved:	Safety Department

Policy

The Company provides hand and powered portable tools that meet accepted safety standards. A damaged or malfunctioning tool must not be used; it must be turned in for servicing and a tool in good condition obtained to complete the job.

Employees must use the correct tool for the work to be performed. If they are unfamiliar with the operation of the tool, they must request instruction from their supervisor before starting the job. Supervisors are responsible for ensuring that their subordinates are properly trained in the operation of any tool that they are expected to operate.

Everyone is required to be responsible for all tools and equipment that they use. Remember where you took the items from and return it. When you lay the items or tool on the ground, remember where you place it. When leaving the job, look around for any tools or equipment that has not been returned to their proper secure place.

Shop Rules

Any The Company location housing shop tools is defined by OSHA as a shop; this include trailers. It is the responsibility of the person in charge of each shop to ensure compliance with the following practices:

- Shop machines and tools are to be used only by qualified personnel
- Equipment guards and protective devices must be used and must not be modified

Precautions

General Precautions

- Employees will be trained in the use of all the tools they use as a part of their job – not just power tools. They must understand the potential hazards as well as the safety precautions to prevent those hazards from occurring.

- The following general precautions should be observed by power tool users:

  - Follow manufacturer's recommendation

- Never carry a tool by the cord or hose
- Never yank/jerk the cord or the hose to disconnect it from the receptacle
- Keep cords and hoses away from heat, oil and sharp edges
- Avoid accidental starting. Disconnect tools when not in use, before servicing and when changing accessories such as blades, bits and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the user's manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn. Loose clothing, ties, jewelry or long hair can become caught in moving parts.
- All portable electric tools that are damaged must be removed from use and tagged as "DO NOT USE"
- All electric power tools must be double insulated or properly grounded.
- Maintain good housekeeping. Cut-offs, scraps and other debris must be kept picked up in work areas.
- Electric tools should be operated within their design limitations.
- When not in use, tools should be stored in a dry place.
- Work areas should be well light.

Guards

- Hazardous moving parts of a power tool need to be safeguarded.
- Guards as necessary should be provided to protect the operator and others from the following:
    - Point of operation
    - In-running nip points
    - Rotating parts; and
    - Flying chips and sparks
- Safety guards must never be removed when a tool is being used.

Safety Switches

- The following hand-held powered tools must be equipped with a momentary contact "on-off" control switch: drills, tappers, fasteners, drivers, horizontal, vertical and angle grinders with wheels larger than 2 inches in diameter, disc and belt sanders, reciprocating saws, saber saws and other similar tools.
    - These tools also may be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
- The following hand-held powered tools may be equipped with only a positive "on-off" control switch platen sanders, disc sanders with discs 2 inches or less in diameter, grinders with wheels 2 inches or less in diameter: routers, planers, laminate trimmers, nibbler, shears, scroll saws and jigsaws with blade shanks ¼ inch wide or less

Type of Tools

Pneumatic Tools

- All pneumatic tools and associated components must be used within the parameters set by the manufacturer
- Pneumatic tools that shoot nails, rivets, or staples and operate at pressures more than 100 lbs per square inch, must be equipped with a special device to keep fasteners from being ejected unless the muzzle is pressed against a work surface.
- Eye, face and hearing protection are required for employees working with pneumatic tools.
- A positive locking device attaching the air hose to the tool must be used.
- If an air hose is more than ½ inch inside diameter, a safety excess flow valve must be installed at the source of the air supply to shut off the air automatically in case the hose breaks.
- Employees operating a jackhammer must wear safety glasses, face shields hearing protection and adequate foot protection.

Liquid-Fuel Tools

- Employees must handle, transport and store gas or fuel only in approved flammable containers, according to proper procedures.
- Before the tank for a fuel powered tool is refilled, the operator must shut down the engine and allow it to cool to prevent accidental ignition of flammable vapors.
- If a fuel-powered tool is used inside a closed area, effective ventilation and/or personal protective equipment is necessary to avoid breathing carbon monoxide.

- A minimum of 10 lb ABC fire extinguishers must be available in the area,
- Eye, face and hearing protection will be required

Powder Actuated Tools

Powder-actuated tools operate like a loaded gun and should be treated with the same respect and precautions. They must be operated only by specially trained employees.

- Safety precautions to remember include the following:
  - These tools should not be used in an explosive or flammable environment
  - Before using the tool , employees should inspect it to determine if it is clean, that all moving parts operate freely, and that the barrel is free from obstructions.
  - The tool should never be pointed at anybody.
  - The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized personnel.
  - Hands should be kept clear of the barrel end. The tools must not be able to operate until they are pressed against the work surface with a force of at least 5 lbs greater that the total weight of the tool.
- If a powder-actuated tool misfire, the employee should wait at least 30 seconds and then try firing it again. If it still does not fire, the operator should wait another 30 seconds so that the faulty cartridge is less likely to explode, and then carefully remove the load. The bad cartridge should be put in water.
- If the tool develops a defect during use, it should be tagged and taken out of service immediately.

Company Provided Tools

The company provides hand and power tools that meet accepted safety standards. Employees are responsible for all tools and equipment they use and must return them to the proper, secure storage area (tool trailer etc.) when the task is complete.

Employee Provided Tools

Employees may be required to provide personal tools based on the trade and work to be performed. A list of required personal tool will be provided to each employee upon hire. Each employee is responsible to document a personal tool listing and submit it to their manager for approval and retention. Employees must notify their manager of any additions, removals and/or replacements to the personal tool listing.

Inspection

All tools must be inspected prior to use. A damaged or malfunctioning tool may not be used. Company provided tools found to be damaged or malfunctioning must be turned in for servicing or replaced. Personal tools found to be damaged or malfunctioning must be replaced by the employee. All damaged or malfunctioning tools must be tagged out of service or "Do Not Use" immediately.

Grounding

Tools that are not double insulated must be effectively grounded and tested. Testing must be accomplished before initial use, after repairs and after any incident that could cause damage, such as dropping or exposure to a wet environment.

Grounded tools must always be used with an effectively grounded circuit. Any extension cord used with a grounded tool must be a three-wire, grounded type. Electric-powered hand tools used on construction site, on temporary wired circuits or in wet environments will be used in conjunction with an approved ground fault circuit interrupter (GFCI). The responsibility for

implementing and maintaining this program rests with the individual supervisors involved. Tool testing equipment will be maintained by the Yard. Documentation of tool testing will be maintained by the group owning powered hand tools. Tools maintain in a tool crib and tested prior to issue are exempted from this requirement. Repairs of defective tools will only be made by qualified personnel.

Theft

Employees are responsible for the security of tools and equipment in their possession, whether on or off the job site.

Theft of tools and/or equipment must be reported immediately to the supervisor, safety department and yard. The police must be notified in all incidents of theft. The company Theft Report Form must be submitted to the safety department within 24 hours of the incident itemizing stolen tools and/or equipment and an estimated value. The police report must be submitted to the safety department as soon as it is available.

Consideration for reimbursement to the employee for personal tools and/or equipment stolen will be based on the following:

- Tools were stolen from the jobsite or job trailer while at jobsite

  (Personal tools stolen from a company vehicle while at an employee's home or away from the yard or jobsite are not reimbursable)

- Tools must be identified on the Theft Report and Police Report
  - Tools must be included on the employee's approved personal tools listing

EMERGENCY RESPONSE PLAN

Project Name: _____

Project Location: _____

Project Superintendent: _____

Project Site Safety: _____

Date: _____

BEFORE THE PROJECT BEGINS the Project Superintendent will:

- Determine the location of the nearest hospital and to identify the names and phone numbers of the project site 1st responders.
- Complete all information required and post/maintain on jobsite.
- Review Chapter 47 of the HWH Safety Manual

This plan must always be accessible on jobsites.

EMERGENCY CONTACT INFORMATION			
Project Name			
Project Address			
GPS Coordinates			
Emergency Meeting Area			
Ambulance:		Police:	
Fire:		Hospital:	
Occupational Health Clinic:			
Poison Control	1.800.222.1222		
NAME	**POSITION**		**PHONE #**
	Project Superintendent		
	Project Foreman		
	Project Manager		
Lance Maness	Sr. Safety Specialist		903.821.8191
Chance Burcham	Manager of Safety & Quality		903.732.7815
	Safety & Training Specialist		903.
HWH	Main Office		903.785.1653
SITE EMERGENCY RESPONSE			
	1ST Responder – 1st Aid & CPR Trained		
	1ST Responder – 1st Aid & CPR Trained		
	1ST Responder – 1st Aid & CPR Trained		
	Landing Zone Setup (if applicable)		
LOCATIONS OF NEAREST ROAD INTERSECTIONS			
Intersection (East to West)	**Longitude**		**Latitude**

SITE MAP

Place Site Map here and mark Emergency Meeting/Muster locations.

RISK ASSESSMENT

1. Is the project located in an areas >/= 40 miles or 30 minutes from the nearest medical facility?

   YES NO

   If yes, where is the nearest medical facility and how far aware is it?

2. Are there specific safety risks associated with the project or site?

   YES NO

   If yes, what are they?

3. Does the area have proper internet connection and cell phone reception?

   YES NO

   If no, what arrangements have been made to ensure this is not problematic?

4. Are you in an area that is prone to severe weather or nature disasters?

   YES NO

   If yes, what are they and what has been done to prepare for them?

5. Are you working in high places, under-ground, in or above water or in confined spaces?

   YES NO

   If yes, what are they and what has been done to prepare for these situations?

_____

_____

_____

6. Do you have personnel assigned to the project who are trained in first aid / CPR? (Must be added to emergency contact listing.)

   YES NO

   If yes, please add each one to the Emergency Contact Listing. If no, please contact the Safety Department immediately to make arrangements for the appropriate training of personnel.

7. Become familiar with Chapter 47 of the Safety Manual - Remote Jobsite. Ensure the appropriate supplies are available onsite, the appropriate training has been completed, and the appropriate agencies have been contacted.

I acknowledge the Risk Assessment responsibilities of my role and commit that I have performed my assessment and planning role in the most effective manner possible. I understand that the safety of the Project and its jobsite is my responsibility and I commit to fulfilling it to the best of my ability, including fully utilizing the Safety Department and other organizational resources that are available for my use.

_____ _____

Project Superintendent Date

Policy

Policy and planning for fire safety at The Company takes into account the fire hazards for specific operating areas, the protection of high-value property, and the safety of employees. These ends are met through various means depending upon the specific area of work and includes things such as: non-combustible or fire-rated materials and construction practices suitable to the assigned uses of building and facilities, alarm systems and automatic extinguishing systems, availability of suitable hand extinguishers for use before firefighters arrive, access to a professional fire department that is staffed and trained in the control of emergencies that could occur. Fire safety in this chapter covers the fire protection responsibilities of employees and supervisors and sets forth the fire safety rules and procedures.

Safety Department

Fires, smoke or potential fire hazards must be reported to the local Fire Department. All employees must conduct their operations in such a way as to minimize the possibility of fire; this means applying rules such as keeping combustible separated from ignition source, being careful about smoking, and avoiding needless accumulation of combustible materials. Supervisors are responsible for keeping their operating areas safe from fire.

The Safety Department and the Fire Department will provide guidance and construction criteria with respect to fire and life safety as well as inspections. The provision and maintenance of fire detection systems and both automatic and manual fire extinguishing equipment is the responsibility of the Safety Department. The superintendent is responsible for notifying the Safety Department of operations that change the degree of fire risk and will therefore require a change in the planned fire protection.

Supervisor Responsibilities

Supervisors must ensure that their personnel are properly instructed regarding potential fire hazards involved in their work and around their workplaces, the proper precautions to minimize fires, and the procedures in case of fire.

The local Fire Department also offers formal courses and training materials on fire prevention and response such as fire safety, fire extinguisher operation, etc.

Welding, Cutting & Brazing and Hot Work Permits

As part of The Company's program to control and reduce fire hazards, a permit system is in effect to cover welding, burning, or other operations with high fire hazard. Typically, operations that require a permit are: welding, soldering, torch, tar pots, open fire for any purpose and spray painting.

Hot work permits will include identification of fire hazards in the hot work area

- The object to be welding should be moved to a safe place, when possible

- If a fire hazard(s) cannot be removed guards must be used to confine the heat, sparks, and/or slag and to protect the immovable fire hazard(s) (i.e. curtains)

  - Wherever floor cracks or holes in the walls, open doorways, open or broken windows or openings that cannot be closed are present, precautions must be taken to ensure that readily combustible materials on the floor below will not be exposed to sparks which may drop through the cracks or openings. It is the welder's responsibility to notify their supervisor and take appropriate action whenever the welder feels that guards are required as they pertain to the rules of the standard and the "special precautions" are observed.

- If hot work cannot be performed safely, it will not be performed until the safety department is contacted and a specialized plan for the work is developed.

A fire watch will be assigned to the work area for a minimum of 30 minutes after the work is completed.

- Any employee assigned the task of fire watch will be trained in the responsibilities of the assignment, the general use of fire extinguishing equipments.

All welding, cutting and brazing equipment must be inspected prior to use, defective equipment must be tagged out of service and reported to the yard manager immediately for repair or replacement.

Welding, cutting or brazing are not permitted in the event of one of the following:

- Sprinkled buildings while the sprinkler system is impaired

- Atmospheres where flammable gases, vapors, liquids or dusts are present

- Storage areas where there are large quantities of exposed, readily ignitable materials.

Local exhaust or general ventilating systems must be provided and arranged to keep the amount of toxic materials, gas or dusts below the acceptable concentrations and exposure limits.

Ventilation must be at the minimum rate of 200 cu ft per minute per welder

All welding and cutting operations carried on in confined spaces must be adequately ventilated to prevent the accumulation of toxic materials, combustible gases or possible oxygen deficiencies.

- Ventilation is a prerequisite to work in confined spaces

- In circumstances where it is impossible to provide adequate ventilation, respirators or masks must be used for this purpose

Portable Heaters

The use of these devices, whether privately or company owned is allowed only where there is no chance of causing injury to personnel or of creating a fire hazard. This provision requires common sense in safely locating such devices and ensuring that they do not operate when they are unattended. These devices may not be used in locations where:

- flammable or explosive vapors or dusts may be present
- smoking, eating and drinking are not permitted
- the area has been designated as unsafe for such devices

The following practices should be carried out when operating a portable heating appliance:

- Do not place the appliance on unstable or readily combustible material
- Maintain a clearance of at least 12 inches between the appliance and any combustible materials
- Ensure that the appliance is approved by either Underwriters Laboratories or Factory Mutual
- Connect the appliance directly to a proper electrical outlet using only the cord with which it was originally equipped
- Do not use extension cords in lieu of permanent wiring
- Do not operate appliances during off hours

Fire Fighting Equipment

There are two different types of firefighting equipment that may be used in working areas for fire protection, fixed equipment and portable equipment. The fixed equipment includes automatic sprinklers, detectors and alarms, fire doors, etc. The portable equipment consists of fire extinguishers which can be operated by employees before the arrival of the local Fire Department.

In the event of a fire, employees who have been trained in the proper use of fire extinguishers may elect to extinguish a small fire so long as they have been trained and their effort does not jeopardize their safety. Our main objective if the fire cannot be immediately contained is to evacuate the area promptly and call 911.

Fire Extinguishers

A fire extinguisher, rated not less than 2A will be provided for each 3,000 square feet of protected building area, or major fraction thereof. Travel distance from any point of the protected are to the nearest extinguisher must not exceed 75 feet.

Fire Extinguishers will be visually inspected a minimum of monthly by a trained company employee. Inspections will be documented by the inspectors initials being entered on the inspection tag attached to the fire extinguisher.

- Damaged or defective equipment will be repaired or replaced immediately

- Annual fire extinguisher inspections will conducted by a local vendor.

Traning will be conducted with all employees' prior to assigning tasks involving the use of fire extinguishers including fire watch for hot work. Training includes, but is not limited to the following:

- General principles of fire extinguisher use

- Hazards involved in incipient stage fire fighting

- Fire extinguisher inspection, storage and accessibility

Refresher training will be completed a minimum of annually, if work assignments or environment change.

Fire Detectors

Automatic fire detectors are used at The Company, according to particular needs and purposes. All of them will detect fire and transmit an alarm to the fire station. In buildings equipped with evacuation alarm bells, the automatic detectors activate those alarms as do the manual pull boxes. In some cases, automatic extinguishing systems are activated by automatic detectors. The Fire Department always dispatches firefighters and apparatus to the scene of any automatically actuated alarm.

Sprinkler Systems

Many buildings are provided with automatic sprinkler systems. The sprinkler heads contain a fusible element which on melting, opens the head and starts a spray of water. The resulting flow of water in the piping activates an alarm at the fire station, and firefighters are dispatched. Automatic sprinkler heads can be damaged if they are subjected to mechanical abuse. A protective cage should be installed where such damage is possible. Heat inadvertently applied to the sprinkler head can also activate the sprinkler when no actual fire is present. Normal heat sources should therefore be kept away from sprinkler heads. To avoid decreasing the flow or spread of water or altering the spray pattern, do not allow material to be located too near a sprinkler head. Allow at least 18 inches of clearance around sprinkler heads. Sprinkler system

control valves must be kept accessible for Fire Department use. Allow at least 3 feet of clearance around valves.

Alarm System

In many buildings, evacuation alarm bells are automatically activated when fire is detected. They can also be activated manually at strategically located pull boxes. The emergency actions of personnel and the evacuation procedures for each building or jobsite area are normally set forth in the Emergency and Evacuation plan procedures for each building or jobsite and posted near/in the job trailer, main entrance, fire exit or elevator. Never use an elevator in the event of a fire.

Fire Exits

Exit corridors must not be used for storage or otherwise blocked. The Life Safety Code NFPA101 required that buildings designed for human occupancy must have continuous and unobstructed exits to permit prompt evacuation of the occupants and allow necessary access for responding emergency personnel. The intent of the Code is to keep exits free from obstructions and clear of combustible materials. Attention to housekeeping is very important. "Temporary" storage of furniture, equipment, supplies or anything else is not permitted in exit ways. Combustibles, including recyclable waste paper, are not permitted in exit ways.

Fire Hydrants

Fire hydrants are maintained for emergency use by the Fire Department. They must be kept accessible and in good working condition. Certain temporary uses may be authorized in writing by the chief or Assistant Chief of the Fire Department. An example of such temporary use may be connection by construction contractors. When temporary connections are authorized, the following practices must be observed:

- Use only valved outlets
- Use only a hydrant spanner provided by the Fire Department
- Close hydrant valves 1/8th turn after fully opening it
- When replacing the outlet caps after using a hydrant screw them on only hand tight

Mechanical Equipment Rooms

Mechanical equipment rooms contain boilers, blowers, compressors, filters, electrical equipment, etc. Such rooms must be separated from other areas of the building by fire resistant walls and doors. To maintain the integrity of these separations, the fire doors must never be left open. Fan rooms house ventilation equipment which often includes automatic shut down and dampers activated by interlocking with the building smoke and fire detectors. Fire dampers and other automatic shut down provisions must not be disabled without Fire Department approval. Mechanical equipment rooms and fan rooms must not be used for storage of any kind.

Construction Areas

Construction areas under control of either The Company or outside contractors must be maintained in a fire-safe condition and accessible to emergency response forces.

Life Safety Code

The Life Safety Code of the National Fire Protection Association (NFPA 101) required that emergency lighting be provided for means of egress in certain areas. The Code states emergency lighting is required in exit corridors in any office type building where the building is two or more stories in height above the level of exit discharge.

Although elevators are not considered a means of egress within the jurisdiction of the Life Safety Code, they do require emergency lighting. Several types of emergency lights that satisfy the specification of the Life Safety Code are:

- Battery type – only rechargeable batteries may be used
    - The rating of the battery must be such that it provides power for illumination for one and one half hours in the event of a failure of normal lighting
- Generator type – when emergency lighting is provided by and electric generator, a delay of not more than 10 seconds is permitted.
- Exit sign lights, when burned out should be replaced as soon as possible.

First Aid	**Chapter:**	10
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 2
	Approved:	Safety Department

Policy

It is the policy of The Company to have available adequate first aid equipment to meet the needs of the number of workers normally present at the jobsite. The Company will also insure the availability of medical personnel for advice and consultation on matters of occupational health for each jobsite.

When a medical facility is not reasonably accessible for treatment of injured employees, a person qualified to render first aid must be available on the jobsite.

Responsibility

The superintendent is responsible to inspect the first aid supplies weekly to determine if the supplies and equipment meet minimum standards and to ensure that in all areas where 911 is not available; the phone numbers of the physicians, hospitals or ambulance are conspicuously posted.

Procedure

When a jobsite is established and prior to starting work, the superintendent, with the assistance of the Safety Department, will make arrangements with the nearest suitable medical facility to accept and treat personnel who are injured or need medical attention beyond the requirements of the first aid kit. The telephone number of the medical facility will be listed on the emergency contact list to be posted near the telephone in the jobsite office.

First Aid Kits

Vehicles

- Small 25 man first aid kits will be available in all company vehicles
- It is the responsibility of the person to which the vehicle is assigned to restock their first aid kit when used, or contents with expiration dates have expired.
    - Supplies can be requested through a representative of the safety department

Job Trailers will be provided with a large 2 or 3 shelf 75 man first aid kit.

- Kits will be inspected by a representative of the safety department prior to project start up and stocked accordingly.
- Site superintendents are required to report usage and restock used items or when contents with expiration dates have expired.

Training

All superintendents and foreman will be trained and competent in first aid / CPR.

Bloodborne Pathogens	**Chapter:**	11
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 3
	Approved:	Safety Department

Introduction

This procedure defines those areas that involve potential contact with bodily fluids that could contain blood borne diseases. This procedure will be routinely evaluated to ensure work practices, engineering controls and requirements are used to eliminate or minimize potential exposures to blood borne pathogens.

The Safety Department is responsible for developing, distributing and implementing an exposure control plan. The plan is designed to provide protection from occupational exposure to the Hepatitis B Virus (HBV) and the Human Immunodeficiency Virus (HIV). Occupational exposure is defined as anticipated skin, eye, mucous membrane, or contact with blood or other potentially infectious materials that may result from the performance of first aid by trained employees designated to administer such service.

Employees will have access to a copy of the exposure control plan.

Exposure Determination

It is likely that first aid providers designated by The Company will be exposed to blood and other infectious materials. Job duties that could result in exposure include routine first aid treatment, emergency first aid treatment, and handling medical waste.

Universal Precautions

The Company has instituted the practice of universal precautions. As a result, all human blood and body fluids will be treated as if they are known to be infectious for HBV, HIV and other blood borne pathogens. In circumstances where it is difficult or impossible to differentiate between body fluid types, we will assume all body fluids to be potentially infectious.

Engineering Controls

The Company has instituted the following engineering controls to isolate or remove the hazard from our work environment:

- Hand washing facilities, antiseptic hand cleaners and towels that are accessible to all employees who have the potential exposure.

- Biohazard stickers to label potentially infectious materials
- Biohazard bags for the segregation and isolation of infectious waste.

Work Practice Controls

In addition to engineering controls, The Company uses the following work practice controls to help eliminate or minimize employee exposure to blood borne pathogens:

- Employees should wash their hands as soon as possible after removing their gloves or other personal protective equipment
- Following any bodily contact with blood or other infectious materials, employees should wash their hands and other exposed skin with soap and water
- Contaminated equipment is examined prior to servicing and decontaminated as necessary

Person Protective Equipment

Personal protective equipment (PPE) is our employee's last line of defense against blood borne pathogens. Therefore, The Company provides, at no cost to the employee, PPE that employees need to protect themselves against such exposure and trains them regarding the use of the appropriate PPE. The equipment that will be provided includes the following:

- Gloves
- Safety glasses
- Goggles
- Mask
- Aprons

To ensure that PPE is not contaminated and is in the best condition to protect employees The Company adheres to the following practice:

- All PPE is periodically inspected and repaired or replaced
- Reusable PPE is cleaned and decontaminated as needed

- Single use PPE is disposed of in the appropriate containers

Hepatitis B Vaccinations

To protect employees from the HBV, The Company has implemented a vaccination program that is available, at no cost to all designated first aid providers. For employees taking part in the vaccination program, an HBV Vaccination Record will be maintained in their safety medical files. Employees who have declined to take part in the program will be required to sign the Vaccination Declination Form. These records will be maintained in accordance with HIPPA laws.

Post Exposure Evaluation & Follow Up

If a designated employee is involved in an incident where exposure to blood borne pathogens may have occurred, an investigation of the circumstances surrounding the exposure incident must be performed. The employee must receive a medical consultation and treatment if required.

Training & Education of Employees

The Company will ensure that all designated first aid providers maintain current credentials from an approved source. In addition blood borne pathogen training will be provided to all employees.

Training will be conducted for applicable employees prior to task assignment.

Refresher training will be conducted a minimum of annually or when changes in responsibilities or workplace exposure dictate.

Training records are retained for no less than 3 years.

Recordkeeping

The Company will track any reported incident of exposure to blood or other potential infectious material. Any illness resulting from exposure will be recorded on the OSHA 300 Log.

Employee medical records will be retained for the duration of employment plus 30 years.

Purpose

Electricity is a serious workplace hazard, capable of causing both employee injury (shocks, electrocution, fires and explosions) as well as serious property damage. By providing personnel with proper training in safe electrical work practices, the company expects to reduce the risk of such incidents.

Scope

The scope for Electrical Safety procedure includes general electrical safe work practices, PPE, hazard control, electrical & test equipment inspections, ground fault circuit interrupters, general rules, and energized electrical work permits. Arc-flash, ground testing, switching, and grounding electrical equipment are not included in this scope.

Definitions

- Qualified worker – An employee who is trained and authorized by the employer to perform work on electrical equipment and components.

- Unqualified worker – An employee who has not been trained or authorized by the employer to perform electrical work.

Responsibilities

- Safety Professionals

Provide technical guidance to ensure compliance to all regulatory standards related to electrical safety.

Provide technical guidance to ensure the proper PPE for electrical safety is purchased for use by field personnel.

Deliver required electrical safety training to include contents of this procedure.

Manage PPE inventory that supports electrical safety to ensure availability for field personnel.

Provide feedback to employees concerning electrical safety should electrical work be in progress while they are on a jobsite.

- **Superintendents**

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Provide feedback to employees concerning electrical safety should electrical work be in progress while they are on jobsite.

Are responsible to notify host employer of unique hazards presented by contract work, unanticipated hazards and any measures taken to correct hazards reported to them.

- Foremen

Provide feedback to employees concerning electrical safety should electrical work be in progress while they are on jobsite.

Responsible to ensure test dates for their crew's PPE and test equipment is current prior to using the PPE or test equipment.

Responsible for ensuring electrical safety training is current their crew, conducting electrical safety inspections, correcting all electrical safety hazards and ensuring that all new electrical equipment and components comply with codes and regulations.

- Employees

Accountable for their own safety performance and therefore shall comply with this procedure.

Provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Detailed Procedure

- General Electrical Safe Work Practices

Working on energized electrical equipment is a last alternative. All activities on or near electrically energized systems having "live" parts must be conducted following the safe work practices.

Employees may not work near live parts or electrical circuits, unless employees are protected with one of the following:

- De-energizing and grounding parts
- Guarding the part by insulation
- Any other effective means

Know the equipment and potential hazards – define the scope of work.

Analyze the hazards – use engineered methods to mitigate hazards.

Establish procedures as necessary.

A site-specific electrical safety plan will be developed prior to the start of work and must include the following:

- Responsible employees
- Energization/re-energization
- Communication

Illumination must be provided in work area containing exposed energized parts to enable employees to work safely. Employees are not permitted to enter areas that are not adequately illuminated.

In work areas where the exact location of underground electrical power lines in unknown, employees using jack hammers, bars or other hand tools that may contact the lines must be protected by insulating gloves, aprons or other protective clothing that will provide equivalent electrical protection.

Barriers or other means of guarding must be used to ensure that confined or enclosed workspace where electrical hazards may exist is protected during

periods when energized parts of equipment are exposed. Unqualified personnel must maintain a 10-foot clearance from energized parts at all times.

Flexible cords must be connected to devices and fittings so that strain relief is provided which will prevent pull from being directly transmitted to joints or terminal screws.

When working under overhead lines the appropriate clearance must be maintained at all times, or the line de-energized and grounded:

Voltage Range (Phase to Phase)	Minimum Safe Approach Distance (feet)
0 to 300V	Avoid Contact
300V to 50 KV	10
>50 KV to 200 KV	15
>200 KV to 350 KV	20
>350 KV to 500 KV	25
>500 KV to 750 KV	35
>750 KV to 1000 KV	45

It is the policy of The Company that no employee will perform any energized work unless all possible efforts have been exhausted to de-energize the system and the appropriate permitting, safety equipment and procedures are in place. Only qualified employees are permitted to work on energized parts.

Do not bypass interlocks or safety devices designed to protect against electrical shock.

Treat exposed de-energized parts as if they are live.

When operating circuit breakers or fused switches, always stand to the side, never directly in front of the device being operated.

- Personal Protective Equipment (PPE)

The company will provide personal protective equipment (PPE) for use by employees working in areas where they could be exposed to electrical hazards. PPE will be provided at no cost to the employee.

Employees are required to observe the following for PPE use:

- PPE use is mandatory when contact with exposed electrical sources is likely.

- Only use PPE that is designed for the work being performed.

- Inspect and test all PPE prior to use
  - Insulating PPE must be inspected prior to use each day and after any incident.
  - Rubber insulating PPE must be inspected tested or replaced annually.

- Use a protective outer cover if the work being performed must damage the PPE's insulation.

- Wear non-conductive headgear if there is danger of electrical burns or shock from contact with exposed, energized equipment

- Hazard Control

The following control methods will be used to prevent occurrence of electricity-related incidents:

Administrative Controls

Only qualified, trained, authorized employees may repair or service electrical equipment.

Contractors must be licensed to perform electrical work.

Physical barriers must be used to prevent unauthorized persons from entering areas where new installation or repair of electrical components or equipment is being performed.

Only qualified employees may enter electrical distribution rooms.

Unqualified persons will not be permitted to enter spaces that are required to be accessible to qualified employees only.

All electrical control devices must be labeled properly.

- Work Practice Controls

Employees covered under this policy must wear electrically rated shoes or boots.

Use only tools that are properly insulated.

Non-conductive gloves will be available for work on electrical equipment.

Job hazard analysis will be performed daily and reviewed by all applicable employees.

- Electrical and Test Equipment Inspections

All electrical equipment will be inspected for hazards that could cause employee injury or death. The following factors will be considered when determining the safety of equipment:

- Suitability for intended use
- Proper insulation
- Heating effects under conditions of use
- Arcing effects
- Classification by type, size, voltage, current capacity and intended use

Tasks within the limited approach boundary such as testing, troubleshooting and voltage measuring can only be performed by trained, authorized, and qualified employees.

All electrical testing instruments, equipment and accessories must be rated for circuits and equipment to which they will be connected.

Test instruments must be verified to be in proper working condition prior to use.

Inspection will be completed prior to use and a minimum of quarterly.

Results of inspection and testing will be recorded and kept in the shop. These results will be reviewed periodically to ensure that all electrical tools are being tested as required. The records will be made available upon request.

- Ground Fault Circuit Interrupters

The Company requires that ground fault circuit interrupters (GFCIs), double insulated plugs or assured equipment grounding conductor program be utilized to protect employees from ground fault hazards at construction sites. Employees will be required to follow a lock out tag out procedure while working to protect from electrical shock.

The options of ground fault circuit interrupters (GFCIs), double insulated plugs or an assured equipment grounding program to protect employees from ground fault hazards are detailed below:

All 120-volt single phase 15- and 20-ampere receptacles that are not part of the permanent wiring and which are in use by employees must be protected by GFCIs or have a double insulated plug for personnel protection. Receptacles on a two wire, single phase portable or vehicle mounted generator rated not more than 5kw, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with GFCI's.

Assured equipment grounding conductor program covering extension cords, receptacles and cord and plug connected equipment must be implemented. The program will consist of the following:

- Daily visual inspections of extension cords and cord and plug connected equipment for defects. Equipment found damaged or defective must not be used until repaired.

- Continuity tests of the equipment grounding conductors or receptacles, extension cords and cord and plug connected equipment. These tests must generally be made every 3 months. If color coding is used, the following coding scheme will be used:

Month	Color Code Scheme	Month	Color Code Scheme
January	ORANGE	July	RED
February	BLUE	August	YELLOW
March	RED	September	ORANGE
April	YELLOW	October	BLUE
May	ORANGE	November	RED
June	BLUE	December	YELLOW

A qualified person will be assigned to be responsible for repairing and inspecting all electrical tools and equipment.

- General Rules

If an electrical apparatus is found damaged or is involved in an incident it is to be immediately pulled from operations and sent to the Yard for inspection, testing and any repairs required.

Visual inspections must be performed daily prior to use on all cord sets, attachment caps, plugs and receptacles of cord sets and any equipment connected by cord and plug to inspect for damage and to verify that the item has been satisfactorily check and color coded. Electrical equipment found damaged will be removed or repaired immediately.

Light bulbs for general illumination must be protected from breakage, and metal shell sockets must be grounded.

Temporary lights must not be suspended by their cords, unless they are so designed.

Portable lighting used in wet or conducive locations, such as tanks or boilers, must be operated at no more than 12 volts or must be protected by GFCIs.

Extension cords must be the three wire type. Extension cords and flexible cords used with temporary and portable lights must be designed for hard or extra hard usage.

Worn or frayed electrical cords or cables must not be used.

Extension cords must not be fastened with staples, hung from nails or suspended by wire.

Work spaces, walkways and similar locations must be kept clear of cords.

Portable ladders must have non-conductive side rails.

Conductive clothing must not be worn unless it is rendered non-conductive by covering, wrapping or other insulating means.

- Energized Electrical Work Permit

Electrical hot work is defined as "working on or near exposed conducting parts that are or might become energized at 50V or more. Some examples of tasks considered electrical hot work include:

- pulling and/or terminating cables inside exposed energized distribution panels
- pulling/replacing fuses on exposed energized circuits
- replacing circuit breakers on exposed energized panels

Working "hot" must be considered a last resort after all other opportunities for establishing an electrically safe work condition have been exhausted.

All hot work performed by HWH must be justified and must be performed in compliance with the requirements of NFPA-70E, OSHA 1926.416 & OSHA 1910.333.

All hot work requires formal review and approval, through the Energized Electrical Work Permit.

The Energized Electrical Work Permit must include the following:

- Description of work to be done

- Description of Circuit / Equipment
- Approval(s) to perform work while electrically energized
- Must be approved by the Owner's Representative
- Shock Hazard Analysis if available
- Flash Hazard Analysis if available
- Hazard Risk Category if available
- Protective Clothing requirements

Arc Flash

Arc Flash Hazard Analysis

An Arc Flash Hazard Analysis is required if there is a possibility that employees may be exposed to energized electrical conductors at 50 or more volts. Based on the nature of work a task-based assessment will apply.

The task-based assessment refers to the tables 130.7(C)(9), 130.7(C)(10), and 130.7(C)(11) included in NFPA 70E (2009). It determines required PPE based on equipment voltage and task. The task-based assessment may be used at the following facilities, if determined appropriate by a qualified engineer: recreational areas, offices, remote communications sites, or similar type facilities.

Warnings

Warnings are designed to inform and remind employees about hazards. Arc flash protection warnings include highly visible barricades, labels, signage, and danger warnings in equipment manuals/operating instructions. NFPA 70E stresses the use of electrical equipment labels that contains specific hazard information.

Periodic Inspections and Program Reviews Periodic inspections and program reviews shall be designed and conducted to identify and correct any weaknesses or deficiencies in the program or procedures, employee training, or enforcement of the requirements.

Management shall ensure that periodic inspections and program reviews are performed a minimum of annually.
A team knowledgeable in the AFH Program, to include a qualified person, shall perform periodic inspections and program reviews at least annually. Personnel

internal to the facility shall conduct the inspection and program review one year and personnel external to the facility shall conduct it the next year.
Periodic program reviews shall cover all elements of the written AFH Program, assess implementation of this program in the facility, and employee understanding.
Periodic inspections and program reviews shall be documented (date, persons involved, results) and identified deficiencies noted. Corrective actions taken to improve the program or employee knowledge of the program must include how any revision of specific procedures or a general change is communicated to the workers

Training

All training shall be delivered by safety professionals to Leadership. Same training shall be delivered by the Leaders to their respective crews.

All personnel who are engaged in electrical work must receive training prior to engaging in any task involving energized or de-energized parts. This training must include verification of understanding (tests and skills demonstrations).

The training must include recognition of electrical hazards, type and magnitude of energy in the workplace, personal protective equipment requirements and the specific requirement of this program.

Additional training is required for qualified persons who are allowed to work within the specified limited approach boundary.

Training records must include the trainee's name, date of training, instructor's signature and verification of understanding and must be retained for the length of the employee's service with the company.

Re-training of personnel in Electrical safety practices is required when:

- A person changes job assignment
- The process or equipment changes and presents new hazards.
- Following a periodic review of the use of the program with all employees involved.
- Annually

Re-training must be documented and include the trainee's name, date of training, instructor's signature and verification of understanding.

Appendix

Energized Electrical Work Permit

Introduction

The purpose of this program is to establish a lock, tag and try procedure that will protect personnel from injury due to electric shock, mechanical injury, flow of product through equipment and to ensure compliance with OSHA Standard 1910.147.

A lock out/ tag out is mandatory whenever employees perform maintenance or service work on machines or equipment.

Each person having immediate control and charge of the equipment requiring a lockout will be responsible that the procedures defined in this program are followed.

Definitions

The following definitions apply to this program:

- Complete Lockout
    - A situation in which each worker does not apply an individual lock. A designated employee in the facility locks out the equipment on behalf of others.
- Custodian
    - The person having immediate charge and control of equipment requiring isolation.
- Custodian lock
    - The lock of the person having immediate charge and control of equipment requiring isolation. The custodian lock is the first lock installed and the last lock removed from equipment.
- Energized
    - Any item connected to an energy source (mechanical, electrical, hydraulic) that has not been isolated.
- Energy Isolating Device
    - A device that physically prevents the transmission or release of energy, including, but not limited to the following:
        - Slide gate
        - Slip blind
        - Line Valve
        - Block (device to prevent movement of potential energy)
        - Any similar device used to block or isolate energy.
- Energy Source

  - Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, radioactive or other energy source that is capable of causing injury to an employee.
- Group Lockout
  - A situation in which at least one individual (the custodian) locks out each separate isolation point in the field and places the key in a lock box. Each non-custodian on the job then attached his personal lock to the lock box. Each person needing lockout protection must have a personal lock in the lock box. A lock on the lock box is considered to effectively lock out each isolation point controlled by the key in the box.
- Lock
  - A device of strong enough construction that it can only be opened by the use of a key or combination.
- Lock Box
  - A sturdy container with a lock which secures the keys used to lockout equipment.
- Lockout/Tag Out
  - The placement of a lock and tag on the energy isolation device in accordance with the established procedure, to indicate that the device or the equipment lock and tag must not be operated until removal of the lock and tag.
- Multiple Lockout Device
  - A device to accommodate more than one lock and tag.
- Motor Operated Valve (MOV)
  - A valve that is operated automatically through the use of an artificial medium.

Procedure

<u>The Lockout / Tagout Procedure form must be complete prior to all energy isolation and review/signed by a representative.</u>

All locks must be accompanied by a “Danger – Do Not Operate” tag properly filled out to indicate:

The reason for the lockout
The date of the lockout
The name of the installer (printed name)

The use of this tag constitutes identification of the person performing the lockout. The tags must be 3" x 5", constructed of a durable material which will not deteriorate when in use in the field and must be attached to the locks in a manner to eliminate inadvertent removal. A grommet hole in the tag larger than the lock shackle or tying the tag to the lock with a nylon cable (50lb. test) are two acceptable methods.

- Equipment Shutdown

- Notify all affected employees that a lockout or tag out system will be in use and inform them of the reason for the lockout.

- Locate the energy source(s) needing isolation

- Shut equipment down by the normal stopping procedure (depress stop button, open toggle switch, etc.). *Note: do not use the electrical disconnect switch to stop equipment*

- Isolate equipment by operating the switch, valve or other energy isolating device(s) to cut the equipment off from its energy source(s)

- Custodian Lock Installation

The custodian lock must be the first installed and the last removed. The custodian has primary responsibility for blearing pipelines and immobilizing valves, electrical circuits, radiation sources, etc. The custodian having immediate charge of the equipment to be isolated must notify all workers involved that the equipment is to be de-energized.

The custodian must ensure that all switches, controls and/or valves are locked out for the particular job identified on the Lock, Tag and Try permit.

The custodian must ensure that all hazardous energy sources have been isolated, de-energized, locked, tagged and tried before any work begins.

(a) Lockout or tag out devices must be affixed to each isolating energy device by authorized employees

(b) Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating device in a safe or off position

(c) Tag out devices, where used, must be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the safe or off position.

(d) Where tag out devices is used with energy isolating devices designed with the capability of being locked, the tag attachment must be fastened at the same point which the lock would have been attached.

(e) Where a tag cannot be affixed directly to the energy isolating device, the tag 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.

The custodian must try the equipment by operating the starting mechanism while confirming that the equipment does not start.

Valves must be chained or otherwise secured to prevent inadvertent operation.

If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation must be continued until the activity is completed or the possibility of such accumulation no longer exists. The custodian's "Danger – Do Not Operate" tag must indicate his/her name, the date and the reason for the lockout.

- Non-Custodian Lock Installation

Non-custodian personnel must obtain the custodians completed lock, tag and try permit which lists all the isolation points for shutdown, isolating, blocking and required securing of all machines or equipment required to control hazardous energy before work is performed.

Each non-custodian must visually inspect each custodial lock at each energy source before work is performed.

In the case of a major shut down or turnaround, the de-energizing procedure must be covered with all employees and/or contractors are the pre-shutdown safety review.

The non-custodian must place his lock(s) at appropriate locations to insure that the system cannot be energized unless his lock has been removed. This may be accomplished in the following ways:

(a) Each non-custodian may place a personal lock and tag at each isolation point in the field.

(b) The custodian locks out each isolation point in the field and places the key(s) in a lock box. Each non-custodian must attach his personal lock to the box. Each non-custodian must still visually inspect each isolation point listed on the Permit.

(c) Also, the custodian must place a lock, keyed differently from the locks in the field, on the lock box to prevent an unauthorized individual from removing the keys after the non-custodian lock(s) have been removed from the lock box.

- Complex Lockout

During the following situations, individual locks may not be required:

(a) During turnaround or major shut downs where many energy isolating devices need to be locked out by a large number of employees.

(b) When large distance between the work location and energy source make it impractical for every individual to affix a lock

(c) Need to energize a piece of equipment or part of a system for testing or trouble shooting

Complex Lockout (Lock Box Method)

- The custodian must follow the same procedure for planning, isolating, locking, tagging and trying equipment as outline in the previous procedure
- The non-custodian must try to start the equipment to verify that isolation and lockout are accomplished.

Shift Change

At shift change, the relieving custodian must obtain the current shift custodian's completed permit. The custodian from the current shift must review the Permit with the relieving custodian to assure that the details of the lockout are communicated and understood.

At shift change the relieving non-custodian must review the completed permit to assure that all details of the lockout are communicated and understood. The relieving non-custodian must prepare a new "Danger – Do Not Operate" tag with his name and date and reason for the lockout.

Removal of Locks

At the completion of a job and when all non-custodian locks and tags have been removed, the custodian must check the equipment to ensure that all guards are replaced and the equipment is ready for operation and then advise all workers involved that the equipment is about to be re-energized.

- Before lockout devices are removed and energy is restored to the machine or equipment, the following must be completed:

  (a) The work area must be inspected around machines and equipment and non-essential items removed and equipment components checked to see that they are operationally intact.

  (b) Affected worker must be advised by the custodian when the locks will be removed and energy restored to the equipment.

- Non-custodial lockout devices must be removed from each energy isolation device by the worker who applied the device. Custodian locks are to be removed by the responsible custodian on duty at the time of removal.
- If an individual finished his assigned work before the whole job is completed, he must remove his lock and tag.
- Individual locks and tags and the locks and tags of the authorized individuals in complex lockouts, must be removed by the person placing them. If for some reason the individual who applied the lock and tag is unavailable, the custodian may remove the lock and tag after the following steps have been taken:

  (a) The custodian must obtain the written approval from the Safety Department.

  (b) The custodian must ensure the equipment is safe to operate without exposing any worker to possible harm.

  (c) The custodian must submit the Lock, Tag and Try Removal Report to the Safety Department.

  (d) Notification must be made no later than the next working day to any individual whose lock was removed in their absence.

Training

All personnel who are engaged in lockout work must receive lockout procedure training prior to engaging in any lockout activity. This training must include verification of understanding (tests and skills demonstrations).

The training must include recognition of hazardous energy sources, type and magnitude of energy in the workplace, and method of energy isolation and control in the workplace.

Training records must include the trainee's name, date of training, instructor's signature, lesson plan and verification of understanding.

Re-training of personnel in the Lock, Tag and try program is required when:

(a) A person changes job assignments

(b) The process or equipment changes and presents new hazards

(c) The lock tag and try program is revised

(d) When an audit, or some other factor, reveals an improper use of the program

(e) Following a periodic review of the use of the program with all employees involved

Re-training must be documented and include the trainee's name, date of training, instructor's signature, lesson plan and verification of understanding.

Program Evaluation

This program will be evaluated at least semi-annually. This evaluation will document, as a minimum, the number of lockout jobs audited, deviations from the program noted, and the corrective actions recommendation to insure proper use of the procedure in the future.

The evaluation will be based on field observations by trained personnel of the application and use of this program. The field observer must not be working under the protection of the lockout which is being inspected.

The field observation will include:

(a) A review between the observer and each worker under the lockout protection
(b) Correction of any deviations or deficiencies noted

The Inspection Report will identify:

(a) The equipment
(b) The date of the inspection
(c) Names of the work crew(s)
(d) Name of the field observer doing the inspection.

Lockout / Tag Out Procedure Form

Date Beginning: _____ **Date Completing:** _____

Team Name: _____ **Location:** _____

Person Completing Form (Custodian): _____

Machine / Equipment to be LO/TO: _____

Type of Energy Source: _____

Phase of Work to be Performed

_____

_____

Lockout / Tag Out Compliance Checklist

Equipment Machinery and Personnel	**Yes**	**No**
a) Notify affected employees and any employees working nearby		
b) Are locks, tags, chains, adapter pins or other hardware available		
c) Are these devices durable and substantial		
d) Are there devices standardized in color, shape and format		
e) Do these devices have a provision for identifying the person applying the device		
f) Do tag out devices or danger tags warn against hazardous condition if the equipment is re-energized (DO NOT OPEN, DO NOT START, DO NOT RE-ENERGIZE)		
g) Are all energy isolating devises operated by only authorized persons		
h) Has all stored energy, residual energy been relieved, disconnected, restrained, or otherwise rendered safe		
i) Has a authorized person verified that the isolation and de-energized machine or equipment been accomplished		
j) Has the work area been inspected before the removal of lockout and tag out devices		
k) Have all tools, material and equipment been removed from the work area		
l) Has the lockout and tag out device been removed by the person who put it on		
m) Have affected employees been notified that the lockout / tag out work is complete		

Reviewed by: _____

Fall Protection	**Chapter:**	14
	Issued:	03.27.2015
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	Pages:	1 of 10
	Owner:	Safety Department

Introduction

This procedure is to identify specific requirements for work that may include potential fall hazards.

Definitions

The following definitions apply to this program:

- Competent Person – an individual who exhibits the following:
  - Knowledge of fall protection equipment, including the manufacture's recommendations and instructions for proper use, inspection, and maintenance.
  - Able to identify existing and potential fall hazards.
  - Knowledge of the rules contained in this program regarding erection, use, inspection, and maintenance of fall protection equipment and systems.
- Drop Line – an independent lifeline secured to an upper anchorage for attaching a lanyard or a fall protection device. This line must be at least a ¾ inch manila rope of a ½ inch nylon rope.
- Fall Restraint System – an approved device and other necessary components that function together to prevent an employee from falling to a lower level. When standard guardrails are selected, compliance with applicable section governing their construction and use will constitute approval.
- Fall Distance – the actual distance from the worker's support to the level where a fall would stop.
- Hardware – snap hook, D-rings, carabiners, buckles, adjusters, and C-rings that are used to attach the components of a fall protection system together.
- Lanyard – a flexible line of webbing, rope, or cable used to secure a harness to a lifeline or an anchorage point, usually 2, 4, or 6 feet long.
- Lifeline – a line from a fixed anchorage or between two anchorages where an employee is secured to prevent the worker from falling to a lower level.
- Rope Grab – a fall arrester that is designed to move up or down a lifeline that is suspended from a fixed overhead or horizontal anchorage point or a lifeline to which the bell or harness is attached. In the event of a fall, the rope grab locks onto the life line rope through compression to arrest the fall. The use of a rope grab device is restricted for fall restraint applications.
- Safety line – see lifeline.

Fall Hazards

The key factor in the protection against falls is hazard recognition. Falls are generally a result of poor work practices, poor conditions, or a combination of both. Standard protection against falls is achieved when adequate guardrails (handrail, mid-rail, toe plate) are installed on work platforms, scaffolds, or stairways (with four or more risers). Fall prevention begins in the planning stage of the project or task. Such planning includes the following:

- Layout and arrangement of tools and equipment.
- Layout of aisles, passageways, floors, entrances, exits, and a clear access way.
- Illumination and weather hazard recognition.

Pre-project planning will include the safety department review of fall hazards and the development of a site specific fall plan by a qualified competent person.

Same Level & Lower-Level Fall Protection

Good housekeeping is the key to the prevention of same level falls. Usable and waste material must be stored out of pathways and must not congest a work area. Surfaces must be kept free of slipping hazards (grease, oil, chemical, metal shavings, etc.).

Floor holes and openings must be covered and labeled with “HOLE” or “Cover” to provide warning of the hazard. Covers located in roadways and vehicular aisles have to be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover. All other covers must be capable of supporting without failure, at least twice the weight of employees, equipment and materials that may be imposed on the cover. Covers must be secured so that accidental displacement by wind, equipment or employees does not occur.

Attempt will be made to maintain even floor surfaces. Material must not be allowed to collect around worktables, desks, threading machines, etc. that may cause a hazard to the worker(s). Welding leads, extension cords, air hoses, etc. must be elevated or positioned in such a way as to prevent tripping hazards.

Fall Protection Systems

<u>100% Tie-off must be maintained</u> when employees are exposed to unprotected sides and edges 6ft or more above the lower level, they must be protected from falling by the use of guardrails, safety nets, or personal fall arrest systems. In the event that scaffolds, ladders, work platforms or mechanical personnel lifts are used, they must be in accordance with manufacturer’s specification and company policy. Below is the expectation and action taken if requirements are not met.

Internal HWH Employee:

If any individual(s) are observed not meeting this requirement, the individual(s) will be removed from the jobsite and the performance improvement program will be utilized for disciplinary action. Retraining will be required and on file with the safety department before employee can return to any jobsite.

HWH Subcontractor Employee:

If any individual(s) are observed not meeting this requirement, the individual(s) will be removed from the jobsite and not allowed back onto any Harrison Walker & Harper jobsite for 30 days and not without proof of retraining documentation being provided to the safety department.

Guardrail Systems

A guardrail system is a barrier erected to prevent employees from falling to lower levels. All guardrail systems must comply with the following:

- A guardrail system must have a top edge height that is 42 in. (plus or minus 3 in.) above the walking/working level. When conditions warrant the height of the top edge may exceed the 45 in height as long as the system meets all other applicable criteria.
- Mid-rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members must be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 in. high.
- Mid-rails must be installed at a height midway between the top edge of the guardrail system and the walking/working level.
- Screen and mesh must extend from the top rail to the walking/working level and along the entire opening between top rail supports.
- Intermediate members, when used between posts, must be less than 19 in apart.
- Other structural members must be installed so that there are no openings in the guardrail system are greater than 19 in wide.
- Top rails and mid-rail must be at last ¼ in diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it must be flagged at 6 ft intervals with high visibility material. Steel and plastic banding may not be used as top or mid-rails.
- Manila, plastic or synthetic rope being used for top rails or mid-rails must be inspected as frequently as necessary to ensure that it continues to meet strength requirements. The ends of top rails and mid-rails may not hang over the terminal posts, except where

the overhang will not constitute a projection hazard. The rails must be surfaced to prevent puncture, laceration or snagging hazards.

- When guardrail systems are used in hoisting areas, a chain, gate, or removable guardrail section is to be placed across the access opening between the guardrail sections when hoisting operations are not taking place.
- Guardrail systems used around holes for passing materials will not have more than two sides that are removable. When guardrails are used at holes or ramps, they will be erected on all unprotected sides or edges.
- Mid-rails, screens, mesh, intermediate vertical members, solid panels and equivalent structural members will withstand, without failure, a force of at least 150 lbs applied in any downward or outward direction at any point along the mid-rail or other member.

Guardrail systems will withstand, without failure, a force of at least 200 lbs applied within 2-in. of the top edge in any outward direction at any point along the top edge. The test load applied in the downward direction cannot deflect the top edge of the guardrail to a height less than 39-in.

Safety Net Systems

When using a safety net, it must be installed as close as possible under the walking/working surface where employees are, but less than 30 ft below such level. Safety nets extend outward from the work surface according to Table 1:

Table 1

Vertical distance from working level to horizontal plane of net	Minimum required horizontal distance of outer edge of net from the edge of the working surface
Up to 5 ft	8 ft
More than 5 ft up to 10 ft	10 ft
More than 10 ft	13 ft

Each safety net's mesh opening cannot be larger than 36sq in or longer than 6 in on any side and the opening, measured center-to-center of mesh ropes or webbing cannot be longer than 6 in. all mesh crossing must be secured to prevent enlargement of the mesh opening. Each safety net will have a border rope for webbing with a minimum breaking strength of 5,000lb.

The connections that are used between safety net panels must be as strong as the integral net components and not spaced more than 6 in apart.

A safety net will be drop tested at the jobsite after initial installation and before being used. Drop-tests will be repeated when the net is moved, after major repairs and at 6-month intervals if it is left in the same place. A drop test consists of a 400-lb bag of sand between 28 and 32 in. in diameter) dropped into the net from the highest walking/working surface where employees are exposed.

Safety nets will be inspected at least once a week for wear, damage, and other deterioration. Defective components will be removed from service. A safety net will also be inspected after any occurrence that could affect its integrity. Any materials, scrap, equipment, or tools that fall into a net will be removed as soon as possible and at least before next work shift.

Personal Fall Arrest Systems

A personal fall arrest system is used to stop an employee in a fall from a working level. It consists of an anchorage and connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or a combination of these. When stopping a fall, a personal fall arrest system will be designed to perform the following:

- Limit maximum arresting force on an employee to 1,800 lb when used with a body harness
- Be rigged such that an employee can neither free-fall more than 6 ft nor contact a lower level
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3 ½ ft
- Have the strength to withstand twice the potential impact energy of an employee free- falling a distance of 6 ft or the free-fall distance permitted by the system, whichever is less

Connectors

All connectors, which may be independent components such as carabiners or integral components like buckles or D-rings, must be made from drop-forged, pressed or formed steel or equivalent materials. They should have corrosion-resistant finish, and all surfaces and edges should be smooth to prevent damage to the system's interfacing parts.

D-rings and snap hooks must have a minimum tensile strength of 5,000 lb and will be proof-tested to minimum tensile load of 3,600 lb without cracking, breaking, or taking permanent deformation.

When using a snap hook, it must be compatible with the member to which it is connected to prevent unintentional disengagement (roll-out) or use a locking-type snap hook that is designed to prevent roll out. A snap hook will not be engaged unless it is a locking type and designed for the following connections:

- To webbing, rope or wire ropes
- To each other
- To a D-ring where another snap hook or connector is attached
- To a horizontal lifeline

When working on platforms or scaffolding with horizontal lifelines that may become vertical lifelines, a connector attached to the horizontal lifeline will lock in both directions.

Lanyard and Lifelines

Horizontal lifelines must be designed, installed and used under the supervision of a qualified person, as part of a complete personal fall arrest system. Lanyards and vertical lifelines will have a minimum breaking strength of 5,000 lb, and each employee must be attached to a separate vertical lifeline.

Self-retracting lanyards and lifelines that automatically limit free-fall distance to 2 ft or less must sustain a minimum tensile load of 5,000 lb. Ropes and straps (webbing) using in lanyards, lifelines and strength components of body harnesses will be made from synthetic fibers.

Lifelines, lanyard and safety harnesses must be protected from cutting, pinching or burning and must not be placed over a sharp edge. In hot work operations, or those involving the use of acids, solvents or caustics, lifelines and lanyards must be kept clear to avoid burning or damage. A two-lanyard system may be needed in climbing from walls, in working pipe racks etc.

Anchorage

Employees must be secured to an object of substantial capacity that is capable of supporting 5,000 lb per employee and will be designed, installed and used as a part of a complete personal fall arrest system that maintains a safety factor of at least two, and it will be used under the supervision of a qualified person.

The anchorage used to support a personal fall arrest system must be independent of any anchorage being used to support or suspend platforms.

Storage and General Use

All equipment must be stored in a clean, dry place that is free from abrasive or cutting materials and excessive heat. Personal fall arrest systems and components subjected to impact loading will be immediately removed from service. The system will not be used again until it is inspected and determined by a competent person to be undamaged and suitable for reuse.

Inspection

Prior to issuance, a qualified person will inspect all safety harnesses, lanyards and lifelines. In addition, the personal fall arrest system must be inspected on a monthly basis following the initial inspection and prior to each use by the wearer and marked with the appropriate color code (see table 2). Monthly Inspections will be documented on the appropriate form for the equipment being inspected. If the wearer feels the safety harness, lanyard or lifeline is not in perfect condition, it must be reported immediately for inspection. A visual inspection will consist of the following:

- Harness
    - Stitching
    - Rivets
    - Buckles & buckle tabs
    - “D” rings
    - Rust & abrasion
    - Burns
    - General appearance

- Lanyards & Lifelines
  - Frayed strands
  - Broken strands
  - Rot
  - Burns
  - Corrosion
  - General appearance

Table 2

Month	Color Code Scheme	Month	Color Code Scheme
January	**ORANGE**	**July**	**RED**
February	**BLUE**	**August**	**YELLOW**
March	**RED**	**September**	**ORANGE**
April	**YELLOW**	**October**	**BLUE**
May	**ORANGE**	**November**	**RED**
June	**BLUE**	**December**	**YELLOW**

Alternatives to Personal Fall Arrest Systems

Where it is not possible to provide guardrails or personal fall arrest systems, alternative methods of worker protection must be used. Examples of such include, but are not limited to, the following:

- Controlled Access Zone
  - A warning line system will be installed a minimum of 6 ft from leading edges to protect employees It will be designed to prevent access by employees to potential fall hazards. The warning/control will extend along the entire length of the unprotected (leading) edge and will be connected on each end to either a guardrail system or a wall. The line will be clearly identified (flagged) and must have minimum sage between 39 and 45 in. from the floor. Employees will be instructed in the intent, uses and limitations of the controlled access area prior to beginning work.
- Safety Monitoring System
  - Another alternative to performing work on flat or low-pitched (less than 4:1) work areas is a safety monitoring system where a designated Competent person will be assigned to monitor the safety of other employees. The safety monitor must comply with the following

requirements while on watch.

- Must be able to recognize potential fall hazards
- Must be able to warn an employee when it appears that the employee is unaware of a potential fall hazard or when the employee is acting in an unsafe manner
- Must remain on the same work level as other employees being watched and in a position to visually see each employee working on the surface
- Must be able to orally communicate with all workers involved in the task
- Will have no other duties except that of a safety monitor

Note: the use of these two methods will require a detailed work description and a fall protection plan as to work requirements written by a competent person designated by the site superintendent and pre-approved by the Safety Department.

Rescue

To ensure prompt rescue in the event that a person falls, and the fall arrest system engages, call 911 (or the appropriate emergency response) immediately. Remove all non-essential personnel from the area. Determine the victim's condition if possible. If the victim is suspended by the fall arrest system, the project site supervisor will designate an employee to retrieve the necessary equipment to reach the victim. If the victim is accessible, provide comfort until emergency personnel are on scene.

During the project planning phase, a project specific fall arrest rescue plan will be developed and include the following:

- Contacts and method of contact
- Rescue Equipment
- Critical Rescue Factors
- Specific response procedures

Training

Employees who may be exposed to fall hazards will be provided training on recognizing and minimizing the hazard. A Competent person who is qualified in the following will train employees:

- The nature of fall hazards in the work area
- The correct procedures for erecting, maintaining, disassembling and inspecting the fall protection system to be used
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones and other protection to be used.
- The role of each employee in the safety monitoring system
- The limitations of mechanical equipment during the performance of roofing work on low-sloped roofs
- The correct procedures for the handling and storage of equipment and material and the erection of overhead protection

A written certification record containing the employee's name, training dates, and the signature of the person who conducted the training should be completed to document employee training. Employees will be retrained if it is evident that they do not understand the material presentation. Retraining is also required when the following occurs:

- Changes in the workplace make previous training obsolete
- Changes in the types of fall protection systems or equipment to be used make previous training obsolete
- Inadequacies in an employee's knowledge or use of fall protection systems or equipment indicate that the employee has not achieved the required level of understanding or skill.

Scaffolding	**Number:**	15
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	Approved:	Safety Department

Purpose

One out of every three deaths in construction results from fatal falls. It is because of this high rate that scaffold workers must be well protected against accidental falls. Generally, precautions must be taken if the employee is expected to work at heights above six feet. Working on scaffolds becomes even more risky when one considers that there is very little space for a person to maneuver, especially when space is also taken up by the various materials that the employee needs to complete his or her job.

The Company's purpose in issuing this program is to further ensure a safe environment by implementing and following formal, written procedures for scaffolding based on OSHA requirements of 29 CFR 1926, Subpart L. Since there are many different types of scaffolds, please refer to sections 1926.451 and 1926.452 for detailed requirements for specific scaffolds.

Scope

These general procedures apply to scaffolds used in the workplace. These procedures address the following:

- Roles and responsibilities
- Requirements of scaffolds and components
- Requirements for erection and disassembly
- Requirements for proper use
- Protective measures
- Prohibited practices
- Training requirements

These procedures do not apply to crane or derrick suspended personnel platforms, or to aerial lifts.

Definitions

Brace – a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

Competent person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Equivalent – alternative designs, materials or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the OSHA standard.

Exposed power lines – electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

Guardrail system - a vertical barrier, consisting of, but not limited to, top-rails, mid-rails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lover levels.

Large area scaffold – a pole scaffold, tube and coupler scaffold, systems scaffold, or fabricated frame scaffold erected over substantially the entire work area.

Lean-to-scaffold - a supported scaffold which is kept erect by tilting it toward and resting it against a building or structure.

Lower levels – areas below the level where the employee is located and to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, and equipment.

Mobile scaffold - powered or unpowered, portable, caster or wheel-mounted supported scaffold. (Also includes scissor lifts)

Open sides and ends – the edges of a platform that are more than 14 inches away horizontally from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous, horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations the horizontal threshold distance is 18 inches.

Personal fall arrest system – a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.

Platform – a surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks, and fabricated platforms.

Scaffold – any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

Unstable objects – items whose strength, configuration, or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms, or employees. Examples include, but are not limited to, barrels boxes, loose brick, and concrete blocks.

Walkway – a portion of a scaffold platform used only for access and not as a work level.

Reference List

OSHA 29 CFR 1926 Subpart L - Scaffolds

- Section: 1926.450 – Definitions
- Section: 1926.451 – General Requirements
- Section: 1926.452 – Additional Requirements Applicable to Specific types of Scaffolds
- Section: 1926.454 – Training Requirements
- Appendices A-E

Responsibilities

Safety Professionals

Shall provide technical guidance to ensure compliance to all regulatory standards related to scaffolds.

Shall verify and/or train competent persons in the use, erecting, disassembling, moving, repairing, maintaining, and inspecting of scaffolds.

Shall provide technical guidance to ensure the proper scaffolds are purchased and/or rented for use by field personnel.

Shall verify that scaffold inspections are being performed by a competent person before every use.

Shall deliver or verify required scaffold training to all employees who perform work while on a scaffold to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.

Shall deliver or verify required training to each employee who is involved in erecting, disassembly, moving, operating, repairing, maintaining, or inspecting of a scaffold.

Shall re-train employees whenever deemed necessary under the re-training criteria of this procedure (Section 7.3).

Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning scaffold use.

Superintendents

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning proper scaffold use and maintenance.

Foremen

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning scaffold use and maintenance.

Employees

Accountable for their own safety performance and therefore shall comply with this procedure.

Accountable to and follow all instructions of the competent person.

Provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Detailed Procedure

Frame or Fabricated scaffolds shall be braced by cross, horizontal, or diagonal braces or a combination thereof, which secure vertical member together laterally.

The cross braces shall be square and align vertical members so that the erected scaffold is always plumb, level, and square and all brace connections shall be secured.

The footing or anchorage for scaffolds must be sound, rigid and capable of carrying the maximum intended load without settling or displacement.

Supported scaffolds should be set on base plates, mud sills or other adequate foundation to ensure the stability of the structure. As such, the footings of the scaffold must be capable of withstanding the load weight that is set upon it without settling or displacement.

Unstable objects such as barrels, boxes, loose brick or concrete blocks must never be used to support scaffolds or planks.

The legs, posts, frames and uprights of the supported scaffold must be plumb and braced to prevent swaying and displacement. The best way to achieve this is to ensure that the entire frame has been set on a level ground and the foundations are at right angles to the ground, thus minimizing any sway.

The two most important factors in ensuring that the scaffold is stable and is not prone to swaying are the strength and structural integrity of the supports. The scaffold and its components must be capable of withstanding up to 4 times their intended maximum weight load as well as the weight of the structure.

Supported scaffolds with a height to base width ratio of more than four to one (4:1), shall be restrained from tipping by guying, tying, bracing, or equivalent means Scaffolds must be tied off horizontally every 30 feet, and vertically every 26 feet.

Guys, ties and braces shall be installed at locations where horizontal members support both inner and outer legs and shall be installed per manufacturer's instructions or per OSHA 1926.451 (c) (1) (ii).

Each employee on a scaffold more than 10 feet above a lower level shall be adequately protected from falling to that lower level through the use of fall arrest systems and/or guardrails.

Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports; the gaps between the planks should not exceed 1 inch.

The scaffold platform and walkway must be at least 18 inches wide (except as provided for in 1926.451 (b) (2) (i & ii).

The front edge of the platform should not be more than 14 inches from the structure being worked on (except for plastering or lathing platforms which shall not be more than 18 inches from the structure being worked on).

Unstable objects shall not be used as working platforms. For wood type decking only planks of 2 inch thick scaffold grade lumber or laminated wood are allowed on scaffolds. For manufactured type decking, manufactured aluminum planks are to be used.

All planking of platforms which are overlapped to create a long platform must be overlapped a minimum of 12 inches or shall be nailed together or otherwise restrained to prevent movement and the overlap shall only occur over supports.

Each end of a platform unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at least 6 inches, but no more than 12 inches.

Mobile scaffold's casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner.

Scaffolds must be stabilized to prevent tipping over while in motion. When the scaffold is being moved manually, force must be applied to an area that is as close to the base as possible, and in an area that is not more than five feet above the ground. If the scaffold is moved using a powered system, system must be designed for that purpose. Scaffolds must be stabilized to prevent tipping during movement.

Ensure uniformity of the scaffold system by adhering to the following practices:

The scaffold must be constructed in accordance with the instructions of the manufacturer.

Do not alter or modify any of the components of the scaffold.

Do not mix and match the components from different manufacturers.

Do not use different metals for the components of the scaffold.

Scaffolds must have guardrails when they exceed six feet in height. Guardrail systems must meet the requirements of 1926.451 (g) (4) and Appendix A. Guardrail systems shall be installed before the scaffold is released for use by employees other than erection/dismantling crews. All open and exposed sides of the scaffold should be fitted with guardrails which consist of at least a top-rail, a mid-rail, and a toe-board.

The top-rail must be between 38 and 45 inches above the platform or walking level of the scaffold.

Guardrails must be manufactured in such a manner that they would be capable of withstanding up to 200 pounds of force applied at any point and from any direction upon the top-rail.

The guardrails must not have any jagged or protruding surfaces that could cause punctures (either in clothing or in skin).

The top-rail and mid-rails must be constructed in such a manner so as not to overhang the scaffold, thereby causing a projection hazard.

The mid-rail must be halfway between the top-rail and the surface of the platform. In case there is the need for other structural panels to be installed (such as additional mid-rails), they should be installed so as not to leave openings that are wider than 19 inches.

Cross-bracing is acceptable in place of a mid-rail when the crossing point of the two braces is between 20 inches and 30 inches above

the working platform.

Mid-rails must be capable of withstanding up to 150 pounds of force applied at any point and from any direction.

Toe-boards or mesh screening shall also be installed, especially if there is any concern of accidentally falling objects striking workers below.

Toe-boards shall be capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction at any point along the toe-board.

Toe-boards must be at least three and one-half inches from the top edge of the toe-board to the level of the walking/working surface and must be fastened securely in place and shall be solid or with openings not over one inch in the greatest dimension.

When intermediate members (such as balusters or additional rails) are used, they shall not be more than 19 inches apart.

Supports must be at intervals not to exceed 8 feet.

In addition to wearing hardhats each employee on a scaffold and working below shall have protection from falling tools, debris, materials, equipment and other small objects by the implementation of the provisions of 1926.451 (h), which include one of the following measures:

Barricade the area below the scaffold to prevent employees from entering the hazard area;

Erect a toe-board of sufficient height to protect the employees below from falling objects;

Install paneling or screening, consisting of No 18 gauge US Standard wire

(1/2" mesh) or equivalent, extending from the toe-board to the top of the guardrail sufficient to protect employees below;

Install a guardrail system with openings small enough to prevent passage of potential falling objects; and/or

Erect a canopy structure, debris net, or catch platform strong enough to withstand the impact forces of the potential falling objects.

When scaffold platforms are more than 2 feet above or below a point of access, a suitable means of access shall be provided per 1926.451 (e). The mode of accessing the scaffold must be designed in a manner that ensures that employees are not needlessly being endangered, both by accessing the scaffold or putting undue pressure on the structure. Cross-braces shall not be used as a means of access.

Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity. Any part of a scaffold damaged or weakened such that its strength is less than required by 1926.451 (a) shall be immediately repaired or replaced.

Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

Insulated lines:

- Less than 300 volts – 3 feet
- 300 volts to 50 kV – 10 feet
- More than 50 kV – 10 feet plus 0.4 inches for each 1 kV over 50 kV

Un-insulated lines:

- Less than 50 kV – 10 feet

- More than 50 kV – 10 feet plus 0.4 inches for each 1 kV over 50 kV

Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling, or alteration.

Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.

Each employee erecting or dismantling a scaffold shall have safe means of access where the provision of safe access is feasible and does not create a greater hazard. A competent person shall determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access. This determination shall be based on site conditions and the type of scaffold being erected or dismantled.

Employees shall use fall protection when erecting or dismantling scaffolds where the installation and use of such protection is feasible and does not create a greater hazard. This fall protection must meet the requirements of 1926.451 (g) (3). A competent person shall determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds.

Prohibited Practices

Employees shall not work on scaffolds which are covered in snow or ice, except as necessary for removal of such materials, or during high winds or storms, unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens.

Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.

Platforms shall not deflect more than 1/60th of the span when loaded.

Do not allow debris to accumulate on the platform.

Makeshift devices shall not be used on the top of scaffold platforms to increase the working level height of employees.

Ladders shall not be used on scaffolds to increase the working level height of employees except on large area scaffolds where the criteria of 1926.451 (f) (15) have been satisfied.

Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement and the provisions of 1926.452 (w) (6) are met which include:

The surface of which the scaffold is being moved is within 3 degrees of level, free of pits, holes and obstructions;

The height to base width ratio of the scaffold during movement is two to one or less;

No employee is on any part of the scaffold which extends outward beyond the wheels, casters or other supports.

Manually propelled scaffolding must not be moved unless all tools and materials are secured.

Do not stack brick, tile, or similar material higher than 24 inches on the scaffold deck.
Defeating or avoiding safety measures including guardrail systems, toe boards, mesh screens, or other safety measure or components is prohibited.

Training

Each employee who performs work on a scaffold will be trained by a qualified person in safe practices. Training will include the following as applicable:

The nature of any scaffold hazards, including electrical hazards, fall hazards and falling object hazards in the work area;

The proper use of the scaffold, and the proper handling of materials on the scaffold;

Proper means of scaffold access;

Proper maintenance and use of scaffold and components;

Practice of good housekeeping to prevent the accumulation of debris, excess materials, tools or other items that may become a hazard;

Proper procedures for cutting or welding from a scaffold;

The design criteria, maximum intended load-carrying capacity and intended use of the scaffold;

Use of tag line when hoisting materials to scaffolds.

Employees involved in erecting, disassembling, moving, operating, repairing, maintaining or inspecting a scaffold shall be trained by a qualified person in the following areas:

Hazards of mixing and matching scaffolds from different manufacturers;

Hazards of using dissimilar metals in assembly;

Stable placement and support of scaffold;

Securing of platform;

Reporting of damaged or weakened scaffold components;

The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question;

The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling object protection systems being used.

Any other pertinent requirements of OSHA 29 CFR 1926.454.

A qualified person shall train employees annually and shall re-train employees in the case of any of the following situations:

Where changes at the worksite present a hazard about which an employee has not been previously trained;

Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained;

Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency;

Anytime there is reason to believe an employee lacks the skill or understanding needed for safe work involving scaffolding.

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Policy

The Company will only permit trained and authorized personnel to create or work in excavations. This program is under the direction of the Competent person. The Competent person is one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. The Superintendent is the competent person in charge of the excavation and trenching procedures on the jobsite, with excavators being trained to the level of competence for the types of excavations with which they work.

Procedure

The estimated location of utility installations such as sewer, telephone, fuel, electric, water lines or any other underground installations that reasonably may be expected to be encountered during excavation work, must be determined prior to opening an excavation.

Prior to the start of excavation or trenching work, a responsible party must be identified and responsible for having subsurface utilities located, verification that historical site drawings have been provided (if available) and has contacted the necessary call before you dig to have right of way utilities located. This will be documented on the Location and Marking of Subsurface Utilities Checklist. After completion of the checklist a copy will be provided to the site competent person for review and retention.

Upon identification of underground utilities, the utility must be marked by an appropriate method and markings upkept throughout the length of the project.

Utility companies or owners must be contacted within established or customary local response times, advised of the proposed work, and ask to establish the location of the utility underground installations prior to the start of actual excavation. When utility companies or owners cannot respond a request to locate underground utility installations within 24 hours (unless a longer prior is required by state or local law), or cannot establish the exact location of these installations, the employer may proceed, provide the employer does so with caution and provided detection equipment or other acceptable means to locate utility installations are used.

If the job site is located near a school, business, or other highly populated area, the responsible party must have private subsurface utilities located. This must occur prior to the start of the actual excavation or trenching. If the job site is in a rural area not near adjacent schools, businesses, or highly populated areas, the right of ways must still be located, and private lines will not need to be located.

Prior to work beginning on site, the appropriate site competent person must verify that the Location and Marking of Subsurface Utilities checklist has been completed and provided. At this time the Field Dig Permit must be completed. This document shall be completed at the following times.

- Before initial work begins on jobsite.
- Once per week after the initial completion of the form.
- The excavation type changes.
- The soil condition changes.
- Site conditions change.

When excavation operations approach the estimated location of underground installations, the exact location of the installations must be determined by safe and acceptable means.

The tolerance zone refers to the amount of space parallel and directly next to the underground utility or installation. The tolerance zone pertaining to underground installations shall be as follows.

- High Voltage, Gas Line, Fiber Optic, or Unknown lines will have a tolerance zone of five feet from each edge of the underground utility or installation. Utilize the hydrovac or hand digging method when within five feet horizontally.
- Water and Sewage lines will have a tolerance zone of 36 inches from each edge of the underground utility or installation. Utilize the hydrovac or hand digging method when within three feet horizontally.

The hydrovac or hand digging method shall be utilized once the task reaches a point of 18 inches vertically away from an underground installation or utility.

Underground Installation Tolerance Zone Chart	
High Voltage	5’
Gas Line	5’
Fiber Optic	5’
Unknown	5’
Water	3’
Sewage	3’

<u>If utilities are within rock subgrades, site specific locates, exposure, and/or pot holing will be implemented.</u>

While the excavation is open, underground installations must be protected, supported, or removed as necessary to safeguard employees. This should be documented on the Utility Shut Down Checklist.

- Each employee in an excavation must be protected from cave-ins by an adequate protective system except when:
- Excavations are made entirely of stable rock, or excavations are less than 5 ft in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

Protective systems must have the capacity to resist, without failure, all loads that are intended or could reasonably be expected to be applied or transmitted to the system. Protective systems may require sloping, benching, or other protective systems such as trench boxes based on the soil classification

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

Employees must also be protected from vehicular and equipment that could pose a hazard by wearing high visibility clothing per Chapter 4 Personal Protective Equipment requirements.

Employees and other personnel must be protected from falls through the use of guardrail systems at crossings and walkways. Guardrail systems will withstand, without failure, a force of at least 200 lbs applied within 2-in. of the top edge in any outward direction at any point along the top edge. The test load applied in the downward direction cannot deflect the top edge of the guardrail to a height less than 39-in.

Employees and other personnel must be protected from the accumulation of water by ensuring that any ground water, rain runoff, and/or other source of water is controlled in the excavation.

Daily inspection of excavations, the adjacent areas, and protective system must be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection must be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections must also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated. The competent person must examine conditions to determine possibility for cave-in. If the potential for cave-in exists, the competent person will use the soil classification method.

Soil classification system is a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the characteristics of the deposits and the environmental conditions of exposure. Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

Where a Competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective system, hazardous atmospheres or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

A stairway, ladder, ramp, or other safe means of egress must be located in trench excavations that are 4 ft or more in depth so as to require no more than 25 ft of lateral travel for employees.

A competent person must decide if the excavation presents the possibility of a hazardous atmosphere, depending on location and depth of excavation. Where there is the possibility of a hazardous atmosphere in an excavation, extra precautions must be used. Refer to the Confined Spaces section of the manual.

Regulatory Requirements

Trench Safety Systems will be installed and maintained in accordance Federal Occupational Safety and Health Administration (OSHA) Standards 29CFR 1926 Subpart P Excavations 1926.650 to 1926.652. All deviation in compliance with these regulations requires preauthorization and approval of appropriate authority.

References

- Location and Marking of Subsurface Utilities Procedure
- Location and Marking of Subsurface Utilities Form
- Field Dig Permit
- Utility Shutdown Checklist
- Confined Space Entry Permit
- Chapter 17 Confined Space
- Chapter 4 Personal Protective Equipment

Introduction

This program is designed to establish safe work practices and minimum safety requirements to be followed while entering, exiting and working in confined spaces. The first step in understanding confined space entry procedures is recognizing a confined space. The contents of this program must be reviewed periodically to ensure that any deficiencies are corrected. Periodic reviews take place a minimum of annually.

Scope

This procedure applies to all personnel whose duties require entry into confined spaces

Permit Required Confined Spaces

A confined space survey will be completed during the project planning phase to ensure that a competent person, through consideration and evaluation f the elements including testing as necessary, identifies all confined spaces in which one or more employees may work and space that is permit required.

A permit required confined space has one or more of the following characteristics:

- Is large enough and so configured that an employee can enter and perform assigned work
- Has limited or restricted means for entry or exit
- Is not designed for continuous employee occupancy
- Has one or more recognized or potential safety hazards, including but not limited to, the following:
    - Contains or has the potential to contain a hazardous atmosphere
    - Contains a material that has the potential for engulfing the entrant
    - Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section
    - Contains any other recognized serious safety or health hazard

Management of each area will determine which confined spaces meet this definition. The Safety Department will provide assistance when requested.

Roles of Individuals in a Confined Space

Entrants, attendants, entry supervisors and atmospheric testers are the four roles that are used in a confined space entry, and each one of these roles has specific responsibilities.

- **Entrants**

An entrant is someone who passes through an opening into a permit- required confined space. Each entrant has the following responsibilities:

- Knows the hazards that may be encountered during entry, including information on how an exposure might occur and, on the signs, symptoms and consequences of the exposure.
- Communicates with the attendant as necessary so that the attendant can monitor the entrant's status and so that the attendant can alert entrants of the need to evacuate the space.
- Alerts the attendant if the following occurs:
    - Recognizes any warning sign or symptoms of exposure to a dangerous situation
    - Detects a prohibited condition, such as an unauthorized person in the confined space.
- Exits from the permit space as quickly as possible whenever an order to evacuate is given by the attendant or the entry supervisor
- Uses the appropriate personal protective equipment (PPE) listed on the confined space entry permit

When work inside the confined space has been completed the entrant will complete the following:

- Determine that equipment used during the entry has been removed from the confined space
- Notify the entry supervisor that the work has been completed.
- Return equipment that may have been borrowed for the entry (monitoring device, mechanical retrieval device, etc.)
- Remove all personal safety lock-out devices
- Prepare permit space to be returned to normal operating condition

- **Attendants**

An attendant is someone who is stationed outside a confined space and who monitors the entrants. Each attendant has the following responsibilities:

- Remain at the point of entry while individuals are within the confined space and must have no other duties that conflict with the primary duties of providing observation of, and communication with the individuals within the permit space. The attendant will leave only if necessary to summon emergency support or if properly relieved.
- It is not company practice to assign a single attendant to monitor multiple confined spaces. Attendants will only be assigned to a single confined space.
- Performs periodic tests of the space on a 15 minute interval and records same on the entrant/test log.
- Maintains visual, voice, radio, etc. contact with the members of the confined space
- Observes behavioral effects of hazard exposure to entrants
- Alerts others in the event of an emergency
- Knows where emergency equipment is located and how to use it
- Notifies the Emergency Response Team if the need for rescue services is required (rescue service may be summoned by radio contact, if available, or by calling an in-house phone extension). Attendants must not enter a confined space for rescue unless they have been trained as a rescuer and have another attendant ready to take over.
- Denies access into the space to all personnel except those persons authorized to occupy the space, including would-be rescuers that are not trained or identified

Note: The attendant will assist emergency responders, but will not enter the space

- **Entry Supervisor**

The entry supervisor is responsible for determine if entry conditions are acceptable at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this procedure. Normally, the entry supervisor is the supervisor of the crew entering the confined space. Each entry supervisor has the following responsibilities:

- Knows the hazards that may be encountered during entry, including information on how exposure might occur and on the signs, symptoms, and consequences of the exposure
- Verifies that the appropriate entries have been made on the entry permit
- Verifies that all tests specified by the permit have been conducted
- Briefs the entry team on the circumstances of this particular permit-required confined space

- Ensures that each member of the operation is trained in confined space work and their responsibilities
- Ensures that the confined space has been drained and cleaned
- Ensures that the permit space has been thoroughly ventilated, preferably with fans or blowers (whenever practical, vapors should be exhausted from the top of the space)
- Verifies that all mechanical devices are disconnected from their power source and proper lock-out procedures have been followed
- Verifies that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry
- Terminates the entry and cancels the permit if conditions warrant
- Verifies that rescue services are available and that the means for summoning them are operable
- Removed unauthorized individuals who enter or attempt to enter the permit space during operations
- Verifies that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

When work inside the confined space has been performed, the entry supervisor will complete the following:

- Be present with the individual who is to close the hatchways and/or covers to confirm that everyone is out of the confined space
- Notifies the appropriate department that the confined space is ready to be placed back into service
- Makes a copy of the permit and returns the original to the appropriate client personnel department

If a noncompliance issue is noted, entry will be terminated until all issues are resolved (i.e., permit expiration, condition development that is not identified on the permit, unauthorized entry, employee complaints, etc.).

- **Atmospheric Tester/Attendant**

The atmospheric tester will test for the following:

- Oxygen Content
  Oxygen content will be between 19.5% and 23.5%. If the atmosphere is either oxygen deficient or oxygen enriched, entry will not be permitted.

- Explosive or Flammability
  There must be no indication of flammable gases on the meter prior to entry. If any flammable gas is detected, purge the confined space until a zero reading is obtained.

- Toxic Gases
  Testing for hydrogen sulfide and carbon monoxide are performed routinely. Additional testing for ammonia, sulfur dioxide, chlorine, methylmercaptan, or other substances may be requested if their presence is suspected. Concentrations of toxic gases or vapors must not be above the recommended permissible exposure limits (PEL) or threshold limit values (TLV). If any measurable toxic gas is found above the PEL or TLV, purge the confined space until an acceptable reading is obtained.

- Subsequent Tests
  At a minimum, subsequent testing shall be made every eight hours, or as necessary, while work is being performed. All re-tests will be conducted by appropriately trained personnel and documented on the entry permit.

- Periodic Tests
  The atmosphere within a permit space shall be periodically tested at intervals not to exceed 15 minutes, to ensure that the means of ventilation is preventing a hazardous situation.

  NOTE: Re-testing of a permit space is required if the space is left unattended for longer than 30 minutes or if the entry supervisor deems it necessary.

Confined Space Entry Permit

The confined space entry permit will be issued by an authorized client representative and completed before anyone enters the confined space. The permit must contain, at a minimum, the following information:

- Permit space to be entered (identify the space as accurately as possible)
- Purpose of entry into the space ("work" is not an acceptable purpose)
- Date and authorized duration of permit
- Individuals authorized to enter the space (each person must sign in and out of the spacer)
- Persons serving as attendant
- Name, title, and signature of authorizing entry supervisor
- List of potential hazards (the entry supervisor is responsible for determining that the potential hazards are listed on the permit). Hazards may include, but are not limited to, the following:

  - Oxygen deficiency
  - Flammable or combustible gas, vapors, mist, or dust
  - Toxic chemicals
  - Physical hazards (trip of fall hazards)
  - Environmental hazards (heat, cold, and noise)
- Methods of isolation, elimination, or control of hazards (attach lock-out procedure and/or material safety data sheets, if applicable)
- Results of atmospheric testing (initial testing, frequency, and results of subsequent tests)
- Means of communication between entrants and attendants
- Rescue or emergency services that can be summoned and the means for summoning those services
- Equipment necessary for entry (PPE, monitoring equipment, communications equipment)
- Any additional permits (hot work, etc.)
- Any additional information that is pertinent to entry into the permit space

Note: Entry permits must be posted in the vicinity of the opening to the permit space.

Personal Protective Equipment

An individual who enters a confined space shall wear a chest or full-body harness with a retrieval line attached at the center of the entrant's back near shoulder level or above the entrant's head. Wristlets may be used in lieu of the chest or full-body harness if it can be demonstrated that the chest or full-body harness is infeasible or creates a greater hazard.

The other end of the retrieval line shall be attached to a mechanical device or fixed point outside of the permit space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

A mechanical device shall be available to retrieve personnel from vertical-type permit spaces more than 5 ft. deep.

When two or more employees are working in a confined space, the lifeline may be detached and left hanging where it is accessible, provided the conditions in the confined space have been checked and found to be okay. The lifeline must be attached to the harness in conditions where an employee is required to wear respiratory equipment or where rescue would be difficult.

Other PPE may be designated by the entry supervisor based on conditions, hazards, and knowledge of the permit being issued for that particular confined space to be entered.

Rescue and Emergency Services

Only those individuals who have been trained to perform rescue duties and in the proper use of the required PPE shall be permitted to attempt rescue procedures in a confined space. Each member of the rescue team shall practice making a permit space rescue at least once every 12 months by participating in a simulated rescue operation where they remove mannequins or actual persons from actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescues are to be performed.

Training

Training will be provided for employees who enter permit-required confined spaces so that they may acquire the necessary understanding, knowledge, and skills to safety perform their assigned duties. Training will occur under the following conditions:

- Before an employee is assigned to confined space work (employees will understand their roles and responsibilities in the entry)
- Whenever a change occurs that affects operation within a confined space
- Whenever there are deviations from the procedures listed on the entry permit or when employees are unsure of their understanding of confined space entry procedures
-

An employee's understanding of safe work practices and the supervisor and/or trainer will determine the procedures for confined space entry work. A confined space entry test shall be given to determine the employee's understanding of the material presented. Certifications with the employee's name, date of training, and trainer's signature on it will be issued to employees that satisfactorily complete the training and testing.

Additional Safety Information

- When flammable materials are being used (coating, lining, paints, cements, or solvents), the perimeter and hatchways of the confined space must be flagged off to identify the flammable materials being used.
- Electrical lighting shall be low voltage (12 volts) with an approved guard over the bulb and/or shall have properly installed ground fault circuit interrupters.
- Air tools should be used whenever possible.
- Any incident involving a confined space shall be reported to the Safety Department. Incidents will be investigated immediately by the Safety Department in conjunction with the Operating Department.
- Where multiple companies are to occupy one confined space, appropriate controls will be defined

prior to entry operations so that work activities will not create a hazard for other employees. Examples of controls include seal decks between work locations, safety nets, work practices, etc.

Requirements for Entry

- **Authorization and Isolation for Confined Space**

A confined space entry permit (a client's or attachment) must be completed for each confined space entry. The ATW must identify the general work environment and work position hazards, including potential hazards associated with more than one work group (e.g., two or more contractors) entering and working in the confined space at the same time. The permit will classify the confined space as non-hazardous, hazardous, or immediately dangerous to life or health (IDLH) and inert-gas blanketed and will identify potential atmosphere-specific hazards such as oxygen deficiency or enrichment, flammable or explosive gases, or other toxic materials. In determining if the confined space will be classified as non-hazardous or hazardous, possible changes in the atmosphere that may occur as a result of the work, processes (i.e., sludge removal, applying coatings, etc.) and possible hazards associated with the work being performed (i.e., water blasting, sand blasting, etc.) must be considered.

The confined space must be isolated and secured in a safe energy state. The confined space hazardous energy isolation procedure must emphasize the following:

- All connections into the confined space must be blinded or disconnected and plugged. This includes hydrocarbon, chemical and inert gas lines, closed drains and pump-out lines, steam, water, air, and connections to closed relief systems. All instrument connections (i.e., gage float chambers, pressure transmitters, etc.) must be appropriately purged, flushed, and cleaned or must be blinded or disconnected and plugged.
- Blind lines must be as close to the vessel as practical and on the vessel side of the block valves. Where any substance can be trapped in the process line to the confined space, a spacer must be used on the confined space side of the blind.
- The use of a single-block valve does not constitute proper vessel isolation for confined space entry. The use of double-block and bleed may only be used when blinding is not possible and must be reviewed and approved by the entry supervisor. The block valves must be chained locked closed, and tried. The bleed valve must be tagged open and checked for a plugged condition.
- Radioactive sources must be shielded and locked out or removed by certified personnel.
- All mechanical equipment inside the confined space must be secured in a safe energy state.
- Special electrical bonding procedures may be required for entry into specific vessels (refer to site-specific standards for the procedure).
- Entry into sewers and underground electrical vaults requires a written isolation and entry plan.

- **Purging the Confined Space**

The confined space is emptied of its normal contents through permanent or temporary pump-out connections. The content disposal must be consistent with all applicable safety and environmental regulations and policies. The confined space is then purged of residue by a hot or cold-water flush and/or steaming or chemical cleaning.

Following the flushing and cleaning and prior to entry, the air mover allows contaminated air to be exhausted from the top of the vessel and fresh, uncontaminated air to sweep from the bottom passageway through the breathing zone inside the confined space. Air movers shall be bonded to the vessel to avoid static charge buildup.

- **Sludge Removal**

As much sludge as possible should be removed prior to initial entry. Sludge removal has the potential to change that confined space atmosphere. This must be considered when determining whether the space will be classified as hazardous or non-hazardous.

- **"DANGER – DO NOT ENTER" Signs**

Persons opening the confined space shall place a "DANGER – DO NOT ENTER" sign at each passageway or entryway as soon as the passageway has been opened or an entryway has been made. Passageways or entryways into potential IDLH or inert-purged confined spaces will be fitted with a protective barrier (e.g., orange construction fencing) to inhibit entry in addition to the "DANGER – DO NOT ENTER" sign.

The entry supervisor must ensure that the "DANGER – DO NOT ENTER" sign remains in place until the conditions in the confined space have been tested and the permit approved and signed. The entry supervisor must also maintain posted signs on tower skirts and similar open confined spaces.

- **Testing the Confined Space Atmosphere**

After the confined space has been prepared, a qualified gas tester shall thoroughly test the confined space atmosphere. If personnel must physically enter a confined space to evaluate atmospheric conditions, the person conducting the test must use an air respirator/SCBA and an outside observer. Consideration must be given to the use of a retrieval system. Air movers must be turned off 15 minutes prior to testing the entry and work area. Air movers may be used for personal comfort, but cannot be used on a continuous basis to create a non-hazardous confined space.

Atmospheric test results must be recorded on the entry permit in the following order:

- Oxygen content
  Oxygen content must be greater than 19.5% by volume and less than 23.5% by volume for unprotected entry. Oxygen content must be less than 5% by volume for inert entry. No person may enter any confined space that has an oxygen concentration greater than 23.5%.

- Flammability
  Atmospheres with greater than 10% of the lower explosion limit (LEL) require further purging or inerting. No person may enter any confined space that has an LEL greater than 10%.

- Toxic Atmosphere
  Unprotected entry will not be allowed if the atmospheric concentration of a chemical is above its OSHA PEL or ACGIH TLV. Toxic chemicals may include benzene, toluene, xylene, carbon monoxide, carbon dioxide, chlorine, ammonia, carbon tetrachloride, etc. Each facility must maintain a list of other toxins to be tested for prior to entry.

Once the confined space atmosphere has been tested, the conditions for entry have been satisfied, and a valid confined space entry permit has been issued, the "DANGER – DO NOT ENTER" sign must be replaced with the "REVIEW PERMIT PRIOR TO ENTRY" sign.

- Continuous and Periodic Atmospheric Testing

Atmospheric testing prior to initial entry should be performed as close as possible to the time work is to begin. No periodic test is valid for more than 14 hours.

This policy is not intended to limit the number of gas tests. Any person may request an additional test any time a questionable condition is suspected. Confined space entry should be halted until the additional test is completed. If the additional test indicates that the confined space entry should not continue, the atmospheric test must be revoked, and the confined space entry permit must be removed from the jobsite. Confined space entry cannot resume until the unsafe condition has been corrected, the confined space has been tested safe, and the confined space entry permit is reissued.

Non-hazardous and hazardous confined spaces must be tested periodically or monitored continuously as necessary to determine if acceptable entry conditions are maintained. If used, monitors must alarm at the appropriate threshold value. Required atmospheric tests not covered by continuous monitoring must be conducted periodically and results must be documented on the confined space entry permit.

- **Inert Atmospheres**

In addition to other required tests, inert gas blanketed confined spaces must be monitored continuously for oxygen content and temperature. The confined space must be evacuated if the oxygen content rises above 5% or the temperature rises 20^{o} F (above normal day/night variations). The confined space must be evaluated for oxygen sources or possible exothermic reactions.

The confined space must also be evacuated if the LEL rises above 10% or the oxygen content falls below 19.5% or rises above 23.5%. Re-entry may not be allowed until isolation has been verified and ventilation has brought the LEL below 10%. Entry may be allowed with the use of special safeguards and PPE when the oxygen content is below 19.5%. Periodic gas test results must be documented in the atmospheric testing section of the confined space entry permit.

- **"REVIEW PERMIT PRIOR TO ENTRY Signs**

The supervisor will replace the "DANGER – DO NOT ENTER" sign with the "REVIEW PERMIT PRIOR TO ENTRY" sign after the confined space has been tested and determined to be within acceptable ranges for oxygen content, flammability, total hydrocarbons, and other toxins or chemicals as dictated by the normal contents of the confined space.

The confined space is not approved for entry until all confined space entry points have been tested and the confined space entry permit has been issued. Entrants must verify that the permit has been properly executed prior to entry.

- **Confined Space Entry**

Non-Hazardous Confined Space

- Entrants must review the entry permit form prior to entry on their shift and must understand and comply with all safeguards related to the specific job tasks.
- If applicable, entrants must review the energy type and magnitude listed in the Hazardous Energy Isolation Procedure and apply their personal lock in the lock box.
- Entrants must verify that a valid confined space entry permit is in place and that atmospheric testing results are current and within acceptable ranges.
- An Attendant must be present at the confined space entry point at all times.

Hazardous Confined Space

Every effort should be made to eliminate the hazards prior to entry. Therefore, the following precautions are necessary for entry into a hazardous confined space.

- Entrants must review the entry permit form prior to initial entry on their shift and must understand and comply with all safeguards related to the specific job tasks.
- If applicable, entrants must review the energy type and magnitude listed on the Hazardous Energy Isolation Procedure and apply their appropriate locks to the lock box.
- Entrants must verify that a valid confined space entry permit is in place and that the atmospheric testing results are current and within acceptable ranges.
- Entrants must sign in with the attendant.
- Entrants must be equipped with a full-body harness with a retrieval line attached at the center of the entrant's back and to a mechanical device or a fixed point outside the confined space. Exception may be granted if the retrieval line creates and entanglement hazard. A supplied air work unit harness is not adequate for retrieval purposes due to the lack of leg straps.
- Entrants must immediately evacuate the confined space when notified by the attendant or when the entrants recognize any warning sign, symptom of exposure to a dangerous situation, or a prohibited condition.
- The client will provide a trained rescue team, and all involved company employees will understand the procedures for summoning them.
- The entry supervisor must visit the confined space to verify that entry is occurring according to permit requirements.
- No company employee will perform work in any confined space that is considered to be IDLH.

Permit Renewal

A confined space entry permit is valid for the duration of the job and must be retained in accordance with the site-specific standard. If confined space conditions change and a prohibited condition develops, the permit may be revoked. Persons revoking the permit must instruct entrants to evacuate the confined space, notify the entry supervisor, and hang the "DANGER – DO NOT ENTER" sign. Isolation, purging, ventilation, and sampling must be performed to find and correct the causes of the prohibited condition before a new permit is issued.

Job Completion

Upon completion of work, an operations representative inspects the area, removes the permit, and ensures that the passageway or entryway is closed.

Entrant Log

An Entrant Log, located on the reverse side of the permit, is maintained at the primary point to all hazardous confined spaces. Entrants must log-in prior to entry and log-out upon exiting the hazardous confined space. The name of the attendant must also be documented on the Entrant Log.

Lighting

Lighting used for confined space entry must be suitable for the confined space. Lighting may be 12 volt or 110 volt with ground fault circuit interrupters (GFCI). GFCI's are not approved for flammable atmospheres and must be located in an area where flammables are not present or a hot work permit must be issued. Wiring of 110 volts inside the confined space must be protected from mechanical damage by routing the wiring inside flexible or rigid conduit from outside the confined space opening to the light fixture or by routing wiring away from areas of potential damage.

Policy

The Company is committed to maintaining safe, productive working conditions for its employees and a safe environment for its customers, visitors, vendors, suppliers, other contractors and members of the general public through support of a drug and alcohol-free workplace.

Policy Objectives

- To prevent accidental injuries to people and to protect the property of the company, employees, our customers and the general public.
- To prevent the occurrence of incidents, the consequences of which may drastically affect the safety and future of company operations.
- To cooperate with our customers and clients in their efforts to contribute to safe and efficient operations.
- To comply with the contractual obligations of our customers or the government.
- To minimize absenteeism/tardiness, improve productivity and to ensure quality workmanship.
- To protect the reputation of The Company and employees within the community, industry at large, and among our customers.

Employees who are under the influence of alcohol or drugs while on the job may pose serious safety and health risks to themselves and to those who work or come into contact with them. The distribution, possession or sale of drugs or alcohol in the workplace may also create unacceptable risks to the safety and efficiency of operations.

Consistent with its commitment to quality work and the welfare of its employees, The Company has established the following policy with regard to the distribution, use, possession, sale or being under the influence of alcohol or drugs. This policy applies to all employees as describe below while on employer time or on employee property. It supersedes all previous policies.

Definitions

(a) Alcohol means ethyl alcohol (ethanol) and includes all beverages, mixtures or preparations that contain ethyl alcohol
(b) Drug means any substance that has known mind or function altering effects upon the human body, or that impairs one's ability to safely perform his/her work, specifically including, but not limited to, all prescription and over-the-counter medications, all

psychoactive substances, all controlled substances, all substances illegal under Federal or State law, all synthetic or designer drugs, all look-alike drugs and all drug paraphernalia.
(c) Possession means to have on one's person, in one's personal effects, in one's vehicle or under one's control.
(d) Sale or Distribution means any exchange, transfer, conveyance or sharing alcohol or drugs whether for money or otherwise.
(e) Under the Influence means that condition wherein any of the body's sensory, cognitive or motor functions or capabilities are altered, impaired, diminished or affected due to alcohol or drugs. Under the influence also means the measurable presence of alcohol or drugs within the body.
(f) Use means consuming, ingesting, drinking, injecting, inhaling, smoking or otherwise using any drug or alcohol.

Pre-employment Drug Screening

The Company requires pre-employment screening urinalysis in an effort to prevent hiring of individuals who use drugs illegally or whose use of legal drugs or alcohol indicates a potential for unsafe job performance.

Prohibitions

- No employee shall report for work or remain on duty while under the influence of any substance prohibited by this policy.
- The use, possession, distribution or sale of any substance prohibited by this policy by any employee during working hours or while on The Company's property or while operating or riding in The Company's vehicles or equipment is prohibited.

It shall not be a violation of this policy for an employee with a current and valid prescription for a drug to use, possess or be under the influence of such drug in the manner and for the purposes prescribed, if such use does not affect the employee's performance or create a risk to the safety of the employee or to others. Employees are responsible for learning of the possible effects of prescription and non-prescription drugs they intend to use while working and must notify the Safety department of such use and of the possible side effects of such drugs or medications. A copy of the prescription and listing of possible side effects will be kept in employee's confidential medical file. All prescriptions must be in the employee's name, must be less than 1 year old, and

must be carried in their original containers. The Company may, at its discretion, require any employee to refrain from working while under the influence of any drug or medication or require any such employee to obtain written authorization from a physician.

Drug & Alcohol Testing

The Company reserves the right to require urinalysis or other drug or alcohol screening of employees at any time and on any employee under any of the following conditions:

- In connection with the overall enforcement of this Drug and Alcohol Policy; or
- On a universal or random testing basis; or
- Where reasonable suspicion exists that the employee is using or is under
- the influence of a drug or alcohol; or
- Where in the sole opinion of Harrison, Walker, and Harper circumstances or conditions justify such testing; or
- In connection with a physical examination; or
- After any incident which results in an injury or damage to property; or
- After any 'near-miss' incident (any incident which, if it had proceeded to a reasonably possible and more serious level of development, would have
- had the potential for personal injuries, property damage, or liability claims).
- Drug screens are required after any work related accident.
- Prior to job related third party or customer arranged testing.
- Return to duty following a medical absence from work of 3 or more days.

All employees are required to consent to such testing as a condition of continued employment and any employee's refusal to consent to such testing will result in immediate termination. Failure to provide a sample for testing within two (2) hours of notification of the test will be considered as a refusal to comply.

Any employee whose test results indicate a blood alcohol concentration that equals or exceeds .04 percent (i.e., .04 gram of alcohol in 100 milliliters of blood) shall be conclusively presumed to have been under the influence of alcohol at the time the sample was taken. The existence of this standard shall not preclude Harrison, Walker, and Harper from determining that an employee with a lower or undetermined blood alcohol concentration is under the influence of alcohol, nor shall it limit The Company's right to discipline or discharge an employee for using or possessing alcohol, regardless of the amount. Any employee whose urinalysis results are positive for the presence of any drug or its metabolites shall be conclusively presumed to have been under the

influence of such drug at the time the sample was taken. The term 'positive' means that a measurable amount of a prohibited substance was present in the urine sample.

Searches

Based on reasonable suspicion, The Company may from time to time without further prior notice, conduct searches for drugs and alcohol on company premises and property, including but not limited to, personal effects, desks, briefcases, lockers, purses, lunch boxes, baggage and employee vehicles as well as any other packages and containers brought onto or removed from company property. All employees are required to cooperate and consent to such searches as a condition of continued employment and any employee's refusal to consent may result in disciplinary action, including immediate termination.

The Company also reserves the right to use professional investigators and trained dogs to conduct searches.

Disciplinary Action

Any violation of the Drug and Alcohol Policy will result in immediate termination.
Employees whose employment is terminated as a result of a substance related issue may be eligible for rehire at the discretion of management.
Applicants whose job offer is rescinded as a result of a substance related issue (as defined by this policy) may re-apply for employment after a minimum of six (6) months.

Confidentiality

All employee information regarding drug and alcohol usage or testing is considered confidential and will be retained in the employee's medical file. Distribution of this information will be only to appropriate management on a need-to-know basis.

Employee Assistance Program

An employee may voluntarily acknowledge a drug or alcohol problem to his/her supervisor or the Human Resources Department and request help in overcoming the problem. Employees may not voluntarily acknowledge a substance abuse problem on the day of a random drug, alcohol or intoxicant test is given. Rehabilitation will be at the employee's expense.

Workplace Violence Prevention	**Chapter:**	19
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 2
	Approved:	Safety Department

Policy

It is the policy of The Company to promote a safe and productive work environment and not to tolerate verbal or physical conduct or action by any employee that harasses, disrupts, or interferes with another's work performance or which creates an intimidating, offensive, or hostile environment.

Responsibilities

Employees are expected to act in a positive manner and contribute to a productive work environment that is free from harassing and disruptive activity. All employees are responsible for maintaining a safe and productive work environment.

Each supervisor has a responsibility to attempt to maintain the workplace free of any form of hostile or oppressive behavior. This policy covers not only acts of physical violence, but all forms of harassment, intimidation, and other types of disruptive or criminal behavior.

Other harassing, violent, or offensive conduct in the workplace, whether committed by supervisors, non-supervisory employees, or non-employees, is also prohibited.

Definitions

Harassing, violent or offensive conduct includes, but is not limited to, the following:

- Any communication whether verbal or in writing, or in any other manner to harass or intimidate any supervisor or employee;
- Verbal abuse of any nature
- Any aggressive action or threat of violence;
- Any degrading words to describe an individual, i.e., "put-down", etc.
- Any unwelcome teasing, all horseplay, or practical jokes, and
- Any violent act or assault, destruction of private or company property, or any threatened act of an aggressive nature.

Reporting

Any employee who believes that a supervisor's, another employee's, or a non-employee's actions or words constitute violence or harassment has a responsibility to report or complain about the situation as soon as possible. Such reports or complaints should be made to the Safety Manager and to the employee's supervisor, or to the supervisor's manager if the

complaint involves the supervisor, or to the Human Resources Manager if the employee feels the complaint is not handled adequately by the supervisor or the supervisor's manager.

Investigation / Resolution

Complaints of harassment or violence will be investigated immediately and in an impartial and confidential manner. Employees are required to cooperate in any investigation. A timely resolution of any complaint will be reached and communicated to the parties involved. Retaliation against any employee for filing a complaint or participating in an investigation is strictly prohibited. All interviews, allegations, statements, and identities will remain confidential to the extent possible and allowed by law.

Any employee, supervisor, or manager who is found to have engaged in harassment of another employee, or intimidation, violence, threats, or aggressive acts in any form toward any employee will be subject to appropriate disciplinary action, up to and including termination.

Employee Reporting – Rights & Responsibilities

Employees are made aware of their right to raise an issue of any harassing, violent or aggressive behavior in the workplace upon hire. Employees are encouraged to immediately contact the Safety Manager, their immediate supervisor, their immediate supervisor's manager, or the Human Resources Manager as described earlier in this policy if they are victims or witnesses of such conduct.

Weapons

In order to ensure a safe environment for employees and customers, the Harper companies prohibit the wearing, transporting, storage or presence of firearms or other dangerous weapons in company facilities/jobsites, company owned vehicles, on company premises and/or while conducting business on behalf of the companies.

> Employees who hold a concealed handgun license (CHL) in accordance with Chapter 411 of the Texas Government Code or otherwise lawfully possess a firearm may store a firearm or ammunition in a locked, privately owned vehicle in the parking area on company property.

Work Zone Traffic Control	**Chapter:**	20
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 3
	Approved:	Safety Department

Policy

The Company requires that an employee attend Work Zone Traffic Control Training before working in any environment that flagging or signaling is required.

General Requirements

General requirements for signaling and flagging can be found in the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and shall be recognized as the Texas standard for all traffic control devices installed on any street, highway, or bicycle trail open to public travel.

A work zone is an area of a highway with construction, maintenance, or utility work activities. A work zone is typically marked by signs, channeling devices, barriers, pavement markings, and/or work vehicles. It extends from the first warning sign or rotating/strobe lights on a vehicle to the END ROAD WORK SIGN or the last temporary traffic control device.

Flagging

A Flagger is a person who provides temporary traffic control.

When to use flaggers:

- When other reasonable traffic control methods will not adequately control traffic in the work zone.
- If signs, signals and barricades do not provide necessary protection from traffic at work zones and construction sites on or adjacent to a highway or street, then you must use flaggers or other appropriate traffic controls.

Flagger Signaling

Flagger signaling must be approved by and conform to guidelines and recommendations of MUTCD.

- Sign paddles must comply with the requirements of MUTCD
- When flagging is done during periods of darkness, sign paddles must be retro-reflective or illuminated in the same manner as signs.
- During emergency situations, red flags meeting the specifications of the MUTCD may be used to draw a driver's attention to particularly hazardous conditions. In non-

emergency situations, a red flag may be held in a flagger's free hand to supplement the use of a sign paddle.

- Employers must position work zone flaggers so they are not exposed to traffic or equipment approaching them from behind.
- If this is not possible, then the employer will develop and use a method to ensure that flaggers have adequate visual warning of traffic and equipment approaching from behind.
- While flagging during daylight hours, a flagger must at least wear an outer garment designed according to Class 2 specifications in the ANSI/ISEA 107-1999, American National Standard for High Visibility Safety Apparel.
- A high-visibility hard hat that is orange in color shall be worn.
- While flagging during hours of darkness, a flagger must at least wear as an outer garment designed according to Class 2 specifications in ANSI/ISEA 107-1999.

Flagger Training

Employers must make sure that each flagger has in their possession a valid traffic control flagger card. The card should have the following information on it:

- Date the flagger received flagger training
- Name of the instructor providing the flagger training
- Name of the state that issued the flagger card
- The cards expiration date, not to exceed three years from the date of issuance.

Flagger training is based upon the MUTCD.

Flagger Orientation & Traffic Control Plan

The employer, responsible contractor or project owner must conduct an orientation that familiarizes the flagger with the job site. This requirement applies each time the flagger is assigned to a new project or when job site conditions change significantly.

The orientation includes, but is not limited to the following:

- The flaggers role and location on the job site
- Motor vehicle and equipment in operation at the site
- Job site traffic patterns
- Communication and signals to be used between flaggers and equipment operators

- On-foot escape route
- Other hazards specific to the job site.

Barricades

Employers must make sure that barricades used for the protection of employees meet the requirements of Part VI of the MUTCD.

At the time of the initial set up or at the time of major stage changes, 100% of each type of device (cones, tubular markers, drums, barricades, and vertical panels, signs, warning lights, arrow panels, changeable message signs, and pavement tape and raised pavement markers) shall be classified as “acceptable”. Throughout the duration of the project, the number of acceptable devices may decrease to 75% of the initial quantity, as a result of damage and/or deterioration during the course of the work with the remainder of the devise in the marginal category. Unacceptable device or situations that are found on the jobsite shall be replaced or the situation corrected within 12 hours of notification or as specified in the contract specifications.

Definitions applicable to this part:

- “Barricade” means an obstruction to detour the passage of persons or vehicles.
- “Signs” are the warnings of hazard, temporarily or permanently affixed or placed at locations where hazards exist.
- “Signals” are moving signs that are provided by workers such as flaggers, or devices such as flashing lights to warn of possible or existing hazards.

High Visibility Vests	**Chapter:**	21
	Issued:	3/27/2015
	Revised:	10/20/2020
	Page:	1 of 2
	Approved:	Safety Department

Policy

The high visibility of these vests will provide another level of protection to our employees when working around other contractors and building owners. Where required, each employee working at a Company jobsite must wear an issued safety vest on the jobsite in addition to other required personal protective equipment. Vests will be required on all Federal projects, indoors and outdoors when working around forklifts, sky tracks, scissor lifts or any other mobile equipment or at any other time deemed necessary by the Mangers and Foremen.

Responsibilities

- **Human Resources/New Hire Employees –** Human Resource Personnel will issue a safety vest to each employee as they are hired. The issuance will be recorded on the Employee Checklist and placed in the employee's file. A copy of this procedure will be distributed to each new hire.
- **Existing Employee –** Existing employees will be issued a safety vest from their supervisor. Each employee working on a The Company jobsite must wear an issued safety vest on the jobsite (where required) in addition to other required personal protective equipment. Employees should request replacement vests from their supervisor. Vests exhibiting normal wear and tear will be replaced by The Company at no charge to the employee.
- **Managers –** Managers and their Foremen will make the determination when safety vests are required. Managers will provide a copy of this procedure to their employees. Each Manager needs to maintain an adequate supply of replacement safety vests for their employees.
- **Superintendents –** Superintendents will ensure that all employees are wearing safety vests on their jobsite (where required). All job trailers will be stocked with an adequate supply of safety vests, in the case that a replacement has to be issued to an employee.
- **Safety Manager –**The Safety Manager will be responsible for maintaining an adequate supply of vests in the safety vehicle and job trailers for employees who request replacement vests at the jobsites. The Safety Manager will include "the wearing of safety vests" on the regular inspection report.

Exceptions

Other than noted above, Superintendents, Managers and Foremen may temporarily waive the use of the vests for the following reasons only:

Welding, Cutting, Brazing – Upon the Supervisor's approval, employees engaged in these types of tasks may be exempt from wearing the vest for the period of time the employee is actually performing the task.

Working With or On High-Speed Machinery/Equipment – Where a hazard exists and upon the Supervisor's approval, employees working with or on high-speed machinery may be exempt from wearing the vests for the period of time that the employee is actually performing the task.

Pre-Job Safety Planning & Job Hazard Analysis	**Chapter:**	22
	Issued:	3/27/2015
	Revised:	01/20/2021
	Page:	1 of 2
	Approved:	Safety Department

Policy

It is the policy of The Company that each job has a pre-job safety review. Pre-job safety planning provides recognition of known and existing hazards. The superintendent and/or Manager will perform the review. A complete hazard analysis shall be completed for each specific step in the construction process. In addition, each Superintendent and/or foreman will develop a Daily Job Hazard Analysis that addresses activities, and identifies potential hazards, along with solutions for each day of the job.

Responsibilities

- Safety Manager – The Safety Manager will be responsible for notifying the appropriate Superintendent or Manager regarding a task review on the new job. The Safety Manager will guide the job Manager through the process of identifying tasks, and their potential for hazards, and making recommendations and requirements to mitigate the hazards.
- Job Manager or Superintendent - The Job Manager or Superintendent will be responsible for identifying the specific steps in the process of constructing the job. They will be responsible for completing the Job Hazard Analysis and conveying the information to the crews and subcontractors as needed.

Procedure

Pre-Job Safety Planning

Upon notification of a start date of a job, the Safety Manager, along with the assigned Manager or Superintendent will set aside time for an in-depth review of the specifications of the job. This will include safety planning for each of the known tasks needed to complete the job. Recognition and elimination of hazards will be of upmost importance. A thorough Hazard Analysis will be performed and documented. The hazard analysis document will then be shared with each affected contractor and/or employee.

Job Hazard Analysis (JHA)

A Job Hazard Analysis must be completed and reviewed daily. This plan outlines specific tasks and the potential hazards therein for the job, specific to a single day. It also outlines equipment activity and qualified operators of said equipment. In addition, training needs are also

identified. Superintendents and Managers will encourage the employees and/or contractors to participate in the development of the daily job hazard analysis and provide additional ideas that can be incorporated into the JHA.

Each employee signs before each task starts indicating that they have given their input and that they understand hazards associated with the performance of tasks and what type of PPE if any is required for guarding against the hazard associated with task performance.

Return to Work Program	**Chapter:**	23
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 3
	Approved:	Safety Department

Policy

It is the policy of The Company to provide a place of employment that is free from recognized hazards that cause or are likely to cause injury. However, when injury does occur, The Company is committed to providing quality medical care and managing cost associated with the claim. In addition, The Company is committed to the effective return to work of injured employees while enhancing their recovery.

Modified duty will be available to comply with the medical restrictions related to the injury.

Purpose

The purpose of this program is to provide useful modified jobs to employees recovering from work related injuries. Temporary, modified job duties that are within the doctors prescribed work restrictions will be provided. The Company works to help employees maintain as close to their normal wages as possible while recovering from injuries.

Responsibilities

- Management –
  - Provide resources and support
  - Assist in employee placement
- Job Manager or Superintendent –
  - Provide job descriptions and alternative duty options
  - Complete accident and other reports
- Employees –
  - Report all injuries immediately no matter how minor
  - Work within medical restriction prescribed by treating doctor
- Safety Department –
  - Administer the Return to Work Program
  - Coordinate with providers and superintendents to place employees into the Return-to-Work program

Program

If you are injured on the job, report to your supervisor IMMEDIATELY. If the injury is serious enough to warrant medical attention the Safety Department will ensure that you receive the proper medical care. If the physician releases you to perform modified duty, alternative work that is within the prescribed restrictions will be provided.

The Safety Department is expected to maintain the following procedures to support injured employees when released to perform modified duty:

- Provide modified work options to the treating doctor based on the employee's position and capabilities.
- Clearly document and explain modified tasks to both the employee and direct supervisor.
- Address reported difficulties with any of the modified tasks that have been assigned.

Company supervision and management are expected to maintain the following procedures to support injured employees when released to perform modified duty:

- Assign modified tasks which comply with prescribed restrictions.
- Notify the Safety Department immediately of difficulties with any of the modified task that have been assigned.
- Notify the Safety Department of the injured employees' absence due to medical treatment

Injured employees on modified duty are expected to maintain the following procedures to support full recovery:

- Work within the medical restrictions prescribed by the treating doctor.
- Notify your supervisor or the Safety Department if you are having any difficulties with any of the modified tasks that you are performing.
- Inform your supervisor in advance is you must leave for a medical appointment.

- Report any change in medical restrictions to the Safety Department as soon as the doctor prescribes them.

Modified duty is not an optional program, and is not available for non-work related injuries. When modified duty is available and the position fits within your medical requirements, you will be expected to perform the assigned tasks. Failure to accept a modified duty assignment could result in the loss of wages and other ramifications involving Workers' Compensation benefits.

Purpose

This document contains practices and procedures to protect employees from fall, mechanical, and operational hazards associated with using aerial work platforms (AWPs). It is the policy of the Company to take every reasonable precaution to provide a safe work environment.

The Company's purpose in issuing this program is to further ensure a safe work environment free from recognizable hazards for its employees in accordance with the General Duty Clause of the OSHA act (Public Law 91-596 Section 5(a) (1) and in accordance with specific OSHA standards (OSHA CFR 1926.453) by implementing and following formal, written procedures for aerial work platforms.

Scope

Aerial lifts include the following types of vehicle-mounted aerial devices used to elevate personnel to job-sites above ground:

- Extendable boom platforms;
- Aerial ladders;
- Articulating boom platforms;
- Vertical towers, and
- Any combination of any such devices.

These general procedures apply to all employees at all Company locations where aerial work platforms are used and maintained. These procedures address the following:

- Roles and responsibilities
- Pre-use inspections
- Maintenance
- Operation
- Work zone inspections
- Battery charging, filling and fueling
- Personal Protective Equipment (PPE)
- Prohibited practices

- Contractors (subcontractors)
- Training requirements

Definitions

Aerial Ladder – an aerial device that consists of a single- or multiple-section rung ladder.

Aerial Work Platform (AWP) – is defined as a mobile or manually propelled device that has an adjustable position platform, supported from ground level by a structure.

Articulating boom platform - An aerial device with two or more hinged boom sections.

Authorized personnel - Those individuals who have been designated by the company as having the authority to execute specific tasks.

Competent person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Exposed power lines – electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

Extendable boom – an aerial device, except for the aerial ladder-type, that has a telescopic boom.

Insulated aerial device – an aerial work platform that is designed with dielectric components to meet specific electrical insulating ratings.

Mechanically positioned – that the elevating assembly, whether a mechanical (cable or chain), hydraulic, pneumatic, electric or other powered mechanism, is used to raise or lower the platform.

Personal fall arrest system – a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.

Platform – the portion of an aerial work platform, such as a bucket, basket, stand, cage, or the equivalent, that is designed to be occupied by personnel.

Power Line – a distribution or transmission electrical line.

Qualified person – those individuals who by certification, degree, experience, or training are "qualified" to perform specific tasks.

Vehicle – means any carrier that is not manually propelled.

Vehicle-mounted elevating and rotating platform – an aerial device or aerial work platform.

Vertical tower – an aerial device that is designed to operate vertically on a level surface.

Reference List

OSHA 29 CFR 1926.453

ANSI A92 standards:

- ANSI A92.2 – Vehicle-Mounted Elevating and Rotating Aerial Devices
- ANSI A92.3 – Manually Propelled Elevating Aerial Platforms
- ANSI A92.5 – Boom-Supported Elevating Work Platforms
- ANSI A92.6 – Self-Propelled Elevating Work Platforms [Scissor Lifts]

Rescue Plans for Aerial Work Platform Use - Scaffold & Access Industry Association (SAIA) Alliance

Aerial work platforms must be designed, constructed, and tested so as to be in compliance with the requirements of the applicable American National Standards Institute standards listed above.

Responsibilities

Safety Professionals

Shall provide technical guidance to ensure compliance to all regulatory standards related to aerial work platforms.

Shall verify and/or conduct training and certification of competent persons in the proper use; hazard recognition; procedures to control or minimize hazards; requirements and proper use of all applicable PPE; and inspection of aerial work platforms.

Shall provide technical guidance to ensure proper aerial work platforms are purchased and/or rented for use by field personnel.

Shall verify that aerial work platform inspections are being performed and documented by a competent person before every use.

Shall re-train employees whenever deemed necessary under the re-training criteria of this procedure

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning aerial work platform use and hazard recognition.

Shall maintain documentation on aerial work platform inspections, operator certifications and re-evaluations.

Superintendents

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning proper aerial work platform use and maintenance.

Work with the Safety Department to investigate injuries and incidents related to aerial work platforms

Foremen

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning proper aerial work platform use and maintenance.

Ensure employees have completed the training appropriate to their assigned tasks

Ensure employees are provided with and use appropriate protective equipment

Employees

Shall be accountable for their safety performance and therefore shall comply with this procedure.

Shall be accountable to and follow all instructions of the competent person.

Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Detailed Procedure

Each aerial work platform must be inspected, maintained, repaired, and kept in proper working condition in accordance with the manufacturer's operating, maintenance and repair manuals.

Pre-use Inspection

Prior to each work shift, each aerial work platform shall undergo a pre-use inspection to verify that the equipment and all its components are in safe operating condition.

Pre-use inspections will identify any conditions or hazards which may affect the safe operation of the aerial work platform and must be documented using the equipment checklist. Specific areas of inspection include:

Vehicle Components

- Proper fluid levels (oil, hydraulic, fuel and coolant);
- Leaks of fluids;
- Wheel and tires;
- Battery and charger;
- Lower-level controls;
- Horn, gauges, lights and backup alarms;
- Steering and brakes.
- Fire Extinguisher

Lift Components

- Operating and emergency controls;
- Personal protective devices (anchor);
- Hydraulic, air, pneumatic, fuel and electrical systems;
- Fiberglass and other insulating components;

- Missing or unreadable placards, warnings, or operational, instructional and control markings;
- Mechanical fasteners and locking pins;
- Cable and wiring harnesses;
- Outriggers, stabilizers and other structures;
- Loose or missing parts;
- Guardrail systems;
- Cracked Welds;
- Bent or broken structural members;
- Slippery conditions on the platform.

If any unsafe conditions or hazard exists, the aerial work platform must be removed from service; a “do not operate” tag attached to the controls inside the platform in a conspicuous location; and the unsafe condition reported to the yard and safety department.

The aerial work platform shall not be used until necessary repairs have been completed.

Maintenance

Only authorized personnel may perform aerial lift repairs and adjustments in accordance with the manufacturer’s operating, maintenance and repair manuals.

All replacement parts must be the same design as the original or an equivalent design as designated by the manufacturer.

An annual inspection is required and must be conducted by an authorized person qualified as a mechanic on the type of aerial lift being inspected.

Maintenance performed by certified lift operators will be limited to replacing/disconnecting/connecting batteries, changing fuel, adding water to the batteries, replacing light bulbs and replacing stickers and decals.

Operation

Only certified operators are permitted to operate an aerial lift.

Operators must review and follow the manufacturer's operating manual.

A copy of the manual must be located on the equipment.

Operators must follow safe work practices when operating an aerial lift; refer to the instructions in this safety manual for common safe work practices.

Before the equipment is started, the operator must walk completely around the equipment to ensure that everyone and everything is clear of the equipment.

Consideration must be given to the amount of wind. As a general rule, aerial lifts will not be operated in winds exceeding 20 mph, depending on the type of equipment and manufacturer's recommendations.

Consideration must be given to the protection of bystanders through the use of barricading, employee safety watch, or other appropriate means.

Guardrails must be installed, and access gates or openings must be closed before operating the lift.

The speed of aerial lift devices must be limited according to: the condition of the surface; congestion; visibility; slope; location of personnel; manufacturer's recommendations; and other potential hazards.

The operator must maintain a clear view of the path of travel being attentive to clearances and any obstacles or hazards above, below and on all sides of the equipment.

Equipment must have an operational back-up alarm and/or a spotter must be used when backing.

Extensible and articulating boom platforms:

Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition.

Only authorized persons shall operate an aerial lift.

Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

Personal fall arrest protection shall be worn and a lanyard attached to a designated anchorage point provided in the basket by the manufacturer.

The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface.

Wheel chocks shall be installed before using an aerial lift on an incline provided they can be safely installed.

Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls.

Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls.

Controls shall be plainly marked as to their function.

Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

Operators are to call for assistance if the platform or any part of the machine becomes entangled or obstructed.

The areas surrounding the elevated platform must be cleared of personnel and equipment prior to lowering the elevated platform.

The following approach distances to energized electrical lines must be maintained:

	Minimum Safe Approach Distance (feet)
0 to 300V	Avoid Contact
300V to 50 KV	10
>50 KV to 200 KV	15
>200 KV to 350 KV	20
>350 KV to 500 KV	25
>500 KV to 750 KV	35
>750 KV to 1000 KV	45

Safe shutdown must be achieved by utilizing a suitable parking area, placing the platform in the stowed position, placing controls in neutral, idling engine for gradual cooling, turning off electrical power and taking the necessary steps to prevent unauthorized use.

Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled, and outriggers are in stowed position.

Ladder trucks and tower trucks – Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

Work Zone Inspections

Work zones must be inspected, and corrective actions taken to eliminate hazards before and during operation of an aerial lift. Items to look for include:

- Drop-offs, holes, or unstable surfaces such as loose dirt.
- Inadequate ceiling heights;
- Slope, ditches, or bumps;
- Debris and floor obstructions;
- Overhead electric power lines and communication cables;
- Other overhead obstructions;
- Other hazardous locations and atmospheres;
- High wind and other severe weather conditions, such as ice;
- The presence of others in close proximity to the work.

Battery Charging, Filling and Fueling

Charging Batteries

Charging is permitted in designated areas only.

Charging areas must have adequate ventilation to prevent the accumulation of hydrogen gas during charging.

A 10 lb. ABC fire extinguisher must be located within 20 feet of the charging area.

The charging area must be protected from damage.

Filling Batteries

When filling batteries with water to the proper level the following personal protective equipment (PPE), at a minimum, must be worn:

- Safety goggles or safety glasses and face shield
- Acid resistant gloves

An eyewash station able to provide 15 minutes of flow must be available within 10 seconds walking distance from the charging location.

Fueling (Liquid Petroleum, Gasoline, Diesel, etc.)

Fueling must be completed in well ventilated areas free of flames, sparks or other hazards which may cause fires or explosions.

Appropriate danger signs must be posted at all fueling locations.

Aerial lifts must be shut off prior to fueling.

LP cylinders must only be stored outside in a secured and protected area.

When removing and attaching the connection to the LP cylinder, the following PPE, at a minimum, must be worn:

- Safety glasses
- Work gloves (leather or equivalent)

LP cylinders must be properly secured to the equipment before operating.

LP cylinder connections must be checked for leaks by the sound or smell of escaping gas.

Personal Protective Equipment (PPE)

Employees must be securely anchored into the basket while operating aerial work platforms.

Operators must be attached to the anchor point provided by the equipment manufacturer by either a self-retracting lanyard or by a lanyard short enough to prevent the employee from being ejected.

The guardrail system attached to the basket is there to provide fall protection and should never be used as a step, straddled, or climbed over at any time while operating the lift.

Hard hats must be worn by all personnel involved in aerial work platform tasks.

Other appropriate PPE, such as hand and hearing protection, must be worn according to the task specific JHA.

Prohibited Practices

Aerial lifts shall not be "field modified" for uses other that those intended by the manufacturer unless the modification has been certified in writing by the manufacturer or by any other equivalent entity, such as a nationally recognized testing laboratory, to be in conformity with all applicable provisions of ANSI A92.2-1969 and OSHA 29 CFR 1926.453 and to be at least as safe as the equipment was before modification.

Securing fall protection to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted.

An aerial truck shall not be moved when the boom is elevated in a working position with workers in the basket, except for equipment which is specifically designed for this type of operation.

Climbing spikes shall not be worn while performing work from an aerial lift.

Boom and basket load limits specified by the manufacturer shall not be exceeded.

The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value.

Aerial lifts must not be operated from trucks, scaffolds or other equipment.

Aerial lifts must not be placed against another object to steady the elevated platform.

Aerial lifts must not be used as a crane or other lifting device.

Aerial lifts must not be operated on grade, or slopes that exceed the manufacturer's recommendations.

Employees must not sit or climb on the guardrails of the aerial lift.

Planks, ladders, or other devices must not be used on the work platform.

Stunt driving and horseplay will not be permitted.

Booms and elevated platform devices must not be positioned in an attempt to jack the wheels off the ground.

On boom-type machines, drive controls must not be used to maneuver in close to an obstacle. The swing and boom functions must be used for maneuvering.

Aerial lifts with any kind of leak in the fuel or hydraulic systems must not be operated until the leak has been eliminated.

Repairs to the fuel and ignition system that involve fire hazards must be conducted in a location (non-flammable) designated for such repairs.

Aerial lifts that emit hazardous sparks or flames from the exhaust system must be immediately taken out of service and must not be operated until the cause has been eliminated.

Contractors (subcontractors)

Contractors (subcontractors) are required to follow all applicable regulations and manufacturer's instruction. Contractors are not permitted to use any aerial lifts owned by the Company.

Training

Only competent authorized persons are allowed to operate an aerial lift.

Training will be administered by a competent person and must be completed prior to use of aerial work platforms.

Training will include safety guidelines for avoiding hazards above, below, and beside the aerial work platform.

Certification of aerial lift operators will include classroom instruction, hands-on training and hand-on evaluation.

Documentation of this training will be maintained by the Safety Professionals.

Training will specifically include the following as applicable:

Explanations of electrical hazards, fall hazards and falling object hazards in the work area and the procedures for dealing with these hazards;

Recognizing and avoiding unsafe conditions in the work setting, including unstable and hazardous surfaces and weather hazards;

Barricade necessity and proper use;

The purpose and use of equipment manuals, placard and decals, and operator warnings and instructions;

The proper use of PPE;

Instructions for correct operation of the lift (including maximum intended

load and load capacity);

Demonstrations of the skill and knowledge needed to operate an aerial lift before operating it on the job;

Pre-operation inspections and record keeping;

Manufacturer's requirements and applicable safety rules and regulations;

Emergency descent and rescue procedures.

Detailed procedures used for the implementation, assembly, inspection, use, maintenance and dismantling of fall protection equipment and any equipment involved in the rescue of a worker.

Self rescue procedures and self rescue equipment if applicable.

Recognition of symptoms and procedures to reduce the risk of venous pooling and orthostatic intolerance in the case that a prompt rescue cannot be performed.

Trainees must successfully complete hands-on training and a hands-on evaluation before being allowed to operate an aerial lift independently. Trainees will be given adequate supervision and time to learn basic operating skills.

Documented re-evaluation of each aerial lift operator will be completed a minimum of once every three years.

Refresher training in relevant topics will be provided when any of the following occur:

The operator has been observed to be using the aerial lift in an unsafe manner;

The operator has been involved in an accident or near miss;

The operator is assigned to operate a different type of equipment;

A condition in the workplace changes in a manner that could affect safe operation of the equipment;

Anytime there is reason to believe an employee lacks the skill or understanding needed for safe work involving aerial work platforms.

Policy

Powered Industrial Trucks pose a serious safety hazard if not properly used. It is the policy of the Company to train employees on hazards of operating powered industrial trucks and to ensure such equipment is safely maintained.

Purpose

This program has been established to ensure safe operation of powered industrial trucks, ensure that employees understand and comply with safety standards related to powered industrial truck operation and assign responsibility to personnel which are necessary for successful implementation.

Scope

This program applies to all employees at all Company locations where powered industrial trucks are used and maintained.

Responsibilities

Safety department –

- o Assist teams in implementing the provisions of the program
- o Approve powered industrial truck trainers
- o Periodically review and update this program
- o Periodically evaluate the overall effectiveness of the program
- o Ensure employees received training appropriate to their assigned tasks and maintain documentation of training
- o Ensure appropriate protective equipment is available to employees

Supervisors –

- o Be thoroughly informed of the contents of this program and its application to their area of responsibility and authority

o Ensure employees comply with all provision of this program

o Ensure employees receive training appropriate to their assigned tasks

o Ensure employees are provided with and use appropriate protective equipment

o Take prompt corrective action when unsafe conditions or practices are observed

o Work with the safety department to investigate injuries and incidents related to powered industrial trucks

o Verify compliance with daily operator inspection requirements

Employees –

o Follow the work practices described in this program, including the use of

appropriate protective equipment

o Complete pre-operational checks before operating equipment

o Immediately report any unsafe conditions or concerns related to powered

industrial truck safety to their supervisor immediately

o Attend all required training

General Requirements

- The Occupational Safety and Health Administration (OSHA) has very clear standards (29 CFR 1910.178) that employees must follow.
- You must be certified prior to operating a powered industrial truck.
- Only trained authorized employees can operator for the company.

Looking for Hazards

- Making the workplace safe involves everyone. Employees must keep an eye open for hazards and report them immediately to their supervisor.

- Hazards in the workplace can include the following:
  - People Materials
  - Untrained
  - Unstackable
  - Indifferent (attitude)
  - Stacked too high
  - Stepping into path
  - Bulky
  - Horseplay
  - Blocks Vision
  - Human Error
  - Unevenly distributed
  - Equipment
  - Environment
  - Inadequate maintenance
  - Congested areas
  - Design difference
  - Poor lighting
  - Wrong for the job
  - Layout
  - Visibility restrictions
  - Uneven floors/ terrain
  - No safety markings
  - Slippery Floors

Capacity

- All powered industrial truck capacities are required to be identified by a securely fastened and legible nameplate.

- The nameplate contains vital information about the truck's capacity. If a powered industrial truck is modified in any way or has an attachment

  added, you must have prior written approval from the lift truck manufacturer.

- The nameplate will show the maximum weight the powered industrial truck can lift and the maximum lifting height at a specific load center distance.
  An unloaded 5,000 lb capacity truck weighs approximately 9,000 lbs.

Stability

- The stability of a powered industrial truck is designed based upon a stability triangle.

- The stability triangle refers to the area of the vehicle which is most stable. The center of gravity of an unloaded powered industrial truck lies roughly underneath the operator.
- The stability triangle can be found between the two front wheels and the center of the axle of the steering wheels.

Visibility

- When operating a powered industrial truck, you must understand the potential hazards of obstructed visibility.

- There are many things that could impede visibility, such as, loads, guards, mirrors, fire extinguishers, lights, lift chains, hoses masts, racks, columns, blind intersections, tractor trailers and pedestrians.
- When traveling with a load that blocks your forward view, you must travel in reverse or use a person to guide you.
- hen traveling through doorways or passthroughs with restricted visibility, horn must be sounded continuously and you must travel in reverse.

Pre-Operational Safety Checks

- Every powered industrial truck must undergo a pre-use inspection prior to use on each shift
- Pre-use inspections must be documented using the equipment inspection checklist.
- The pre-use inspection will identify conditions that could affect the safe
- use of the powered industrial truck. If any unsafe exists, the powered industrial truck must be removed from service.

- Operators must immediately report any unsafe powered industrial truck conditions to the yard and safety department.

- The maintenance department will ensure necessary arrangements are made for repair.

- Only authorized personnel may perform powered industrial truck repairs and adjustments. All replacement parts must be the same design as the original or an equivalent design as designated by the manufacturer.

Classes of Powered Industrial Trucks

There are seven (7) classes of Powered Industrial trucks:

- Class 1 – Electric motor, counterbalance, rider truck (solid or pneumatic
- tires)
- Class 2 – Electric motor, narrow aisle trucks (solid tires)
- Class 3 – Electric motor hand trucks or hand/rider trucks (solid tires)
- Class 4 – Internal combustion engine trucks (solid tires)
- Class 5 – Internal combustion engine trucks (pneumatic tires)
- Class 6 – Electric and internal combustion engine tractors (solid and
- pneumatic tires)
- Class 7 – Rough terrain trucks (pneumatic tires)

Safe Work Practices

General Safe Operation

- Unauthorized personnel must not be permitted to operate powered industrial trucks

- Travel with forks 4” above the ground.
    - Pushing or ‘training’ pallets is strictly prohibited
- Do not start or operate a powered industrial truck, any of its functions or attachments, from any place other than from the designated operator’s position

- Keep hands and feet inside the operator's designated area or compartment.
- Do not put any part of the body outside the operator compartment of the truck
- Never put any part of the body within reach of the mechanism on the truck or other attachment

- Do not allow anyone to stand or pass under the elevated portion of any truck, whether empty or loaded

- Never lift a person using a powered industrial truck unless it is specifically designed to do so

- Report defects, leaks, etc. to the yard immediately.

Traveling

- Powered industrial trucks must not be driven up to anyone standing in front of any fixed object

- Operators must ensure that no passengers ride on the truck
- Operators must stay inside the confines or guard of the truck
- Travel with forks 4" above the ground.
    - Pushing or 'training' objects is strictly prohibited
- Operators must be aware of overhead electrical fixtures, valves, sprinkler systems, etc. during high lift operations

- Avoid driving over loose objects or holes
- Reduce speed on wet and slippery floors, when crossing bridge plates, when vision is restricted, when carrying a load or when traveling over uneven surfaces and in congested areas

- Maintain a distance of 20 feet clearance when behind another truck traveling in the same direction

- Always be aware of pedestrians
- Stunt driving and horse play will not be permitted
- Railway track must always be crossed diagonally, at approved crossings and after looking to be certain it is safe to do so

- If leaving the truck for any reason, all the controls of the truck will be placed in neutral and the brakes applied.
- Powered industrial trucks should not be parked in a way that would block a means of egress
- When traveling with a load that blocks your forward view or through doorways or passthroughs with restricted visibility, you must travel in reverse.

Training

- Training must be completed prior to use of any powered industrial truck.
- Certification of powered industrial truck operators will include classroom instruction, practical training, and practical evaluation.
- Training will be completed by a competent person and/or a qualified member of the safety department team.
- Powered industrial truck training will cover the following:
  - Operator manual
  - Limitations of attachments
  - Data plate capacity information
  - Factors affecting stability
  - A pre-start inspection
  - Responsibilities associated with problems or malfunctions
  - affecting the operation of the truck.
  - Know your workplace and environment
  - Vehicle and pedestrian hazards
  - Visibility
  - Uneven surfaces / ramps
  - Applicable safety rules and regulations
  - Refueling
  - Authorization to operate
  - Operator warnings and instructions

- Trainees must successfully complete practical training and a practical evaluation before being allowed to operate a powered industrial truck independently. Trainees will be given adequate supervision and time to learn basic operating skills.

- Documented re-evaluation of each powered industrial truck operator will be completed a minimum of once every three years.

- Refresher training in relevant topics will be provided when any of the following occur:
    - The operator has been observed to be using the powered industrial truck in an unsafe manner
    - The operator has been involved in an accident or near miss
    - The operator is assigned to operate a different type of truck
    - A condition in the workplace changes in a manner that could affect safe operation of the truck

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Policy

It is the policy of the Company to train employees on hazards of Crane safety and to ensure such equipment is safely inspected and maintained.

Purpose

The purpose of the Crane safety program is to define the work practices and the inspection procedures to help ensure that the operators of cranes are protected from potential hazards associated with the operations and movement of the equipment and material.

Scope

The provisions of the Crane Safety program apply to all employees who operate and use cranes, hoists, chains, and slings.

Responsibilities

- Safety department –
    - Assist teams in implementing the provisions of the program
    - Periodically review and update this program
    - Periodically evaluate the overall effectiveness of the program
    - Ensure employees received training appropriate to their assigned tasks and maintain documentation of training
    - Ensure appropriate protective equipment is available to employees
    - Ensure lift plan is submitted, reviewed and approved prior to lift
- Supervisors –
    - Be thoroughly informed of the contents of this program and its application to their area of responsibility and authority
    - Inspection ground conditions to ensure ability to support equipment and supporting materials per manufacturer's specifications.
    - Ensure employees comply with all provision of this program
    - Ensure procedures applicable to the operation of equipment are readily available in the cab of equipment at all times.
    - Submit a lift plan to Safety Department for review and approval
    - Ensure employees receive training appropriate to their assigned tasks

  - Ensure employees are provided with and use appropriate protective equipment
  - Take prompt corrective action when unsafe conditions or practices are observed
  - Work with the safety department to investigate injuries and incidents related to crane operations
- Employees –
  - Follow the work practices described in this program, including the use of appropriate protective equipment
  - Attend all training required
  - Conduct the appropriate inspections when required and complete required documentation.
  - Immediately report any unsafe conditions or concerns related to crane safety to their supervisor immediately
  - Immediately stop and refuse to handle loads if safety is a concern

Fitness for Duty

The operator of cranes (and hoists 2 tons or larger) must be physically fit and thoroughly trained, competent individual, and not using any drug that could impair physical, visual or mental reactions or capabilities, and must understand all the regulations regarding crane safety.

- Crane operator physical will be completed by an occupational medical facility and maintained in the safety department. Fitness information will be provided to client upon request.

Inspections

Crane inspections are divided into two general classifications: frequent Inspections and Periodic Inspections. Inspection checklists are completed as part of the inspection process.

Frequent Inspections

- Rope slings, hook and other lifting equipment must be visually inspected prior to each day's use. All parts including chains, cables, ropes, hooks etc. must be visually inspected before use for deformation, cracks, excessive wear, twists, stretch, or other signs of deterioration that may pose a hazard during use.

- Hooks and chains must be visually inspected before each use and monthly with a certification record which documents the date of inspection, the signature of the person who performed the inspection, and serial number or other identifier from the equipment.
    - Hooks that have cracks or have more that 15 percent in excess of normal throat opening or more than 10 percent twist from the plane of the unbent hook should be replaced.
- Running ropes must be inspected monthly. A certification record which includes the date of the inspection and signature of the person who performed the inspection should be prepared. Any deterioration which results in appreciable loss of strength must be inspected and a determination made as to whether further use of the rope constitutes a safety hazard. The monthly inspection will consist of noting the following disqualifying conditions:
    - Reduction of rope diameter below a nominal diameter due to loss of core support, internal or external corrosion or wear of outside wires
    - Three broken wires in one strand in one lay length or six broken wires in any one lay length.
    - Worn outside wires
    - Corroded or broken wires at connections
    - Corroded, cracked, bent, worn or improperly applied end connections on the equipment name plate
    - Severe kinking, crushing, cutting or un-stranding

Periodic Inspections

- Periodic inspections must be conducted by a trained company employee or a contract certified inspection service.
- A complete inspection of the crane must be performed at least every 12 months. The inspection should include:
    - Noting any cracked, corroded, worn or loose members or parts
    - Noting and replacing loose bolts and tightening those bolts
    - Testing the limit indicators (wind, load, etc.) power and electrical apparatus

  - Load testing must be performed no more than 125 percent of the rated load, unless it is otherwise recommended by the equipment manufacturer
  - Examining the electrical apparatus for any signs of pitting, or any deterioration of controller contractors, limit switches and push button stations
  - Travel distance steering
  - Testing and braking system for excessive wear on the lining, pawls and ratchets
  - Hooks and cables
- If any adjustments have to be made to the unit, the crane will not be operated until all the guards have been installed, all safety devices reactivated, and all maintenance equipment moved. If any defect is found, the crane will not be operated until the repair, or the adjustment is made.
- Any modifications or additions that may affect the capacity of safe operation of the equipment must not be made without written approval from the manufacturer or a registered PE.

Assembly / Disassembly

Manufacturer instructions for equipment must be followed when assembling or disassembly equipment.

A qualified competent person must direct the assembly and/or disassembly of all equipment.

Crane Requirements

- Load lines will be capable of supporting, without failure, at least seven (7) times maximum intended load. Anti-rotation rope will be capable of supporting ten (10) times the maximum intended load.
- The load line hoist drum will have controlled load lowering – free-fall is prohibited.
- The crane will be uniformly level, within one percent (1%) level grade on firm footing; and outriggers with pads must be used.
- Total weight of the loaded platform and rigging will not exceed 50% of the rated capacity for the radius and configuration of the crane.

- Crane will be equipped with and have in good working order the following:
  - Boom angle indicator
  - Boom length indicator (for telescoping)
  - Swivel hook to prevent load spinning
  - Power up / down lever to remain functional for any system failure
  - Anti-two block device

Crane Operation

Cranes must not be used unless ground conditions are able to support the equipment and any supporting materials per manufacturer's specifications. The crane must be level with all outriggers down on firm ground or footing prior to lifting loads or swinging the boom over the side.

Operators must not leave their position at the controls while the load is suspended or pass under a suspended load on the hook. Other employees must never walk under a suspended load.

Pre-Operation Hazard Assessment

A lift plan must be completed, submitted and reviewed by the Safety Department for approval prior to the beginning of work.

Before the work begins, a pre-assessment must be conducted to identify the work zone and determine if any part of the equipment or load could reach closer than twenty (20) feet to the power line.

- If it is determined that any part of the equipment or load could reach closer than twenty (20) feet of the power line, the person responsible for the operation must contact the utility company to arrange:

  - Temporarily diverting lines around the job site, or to be de-energized and visibly grounded at the place of work.
  - Erecting insulating barriers prevent physical contact between the crane, load and lines.

- If the above options are not feasible, the following procedures must be observed:

  - An on-site meeting must be held between the people responsible for the job, a representative of the electrical utility, the operator and all personnel involved in the lift (signal person, riggers, etc) to establish the specific procedures to be followed.
  - Everyone must understand the procedures as well as the hazards of working around energized power lines, and how they can be avoided.

If the equipment or machinery must be operated next to electrical lines, then the following distances must be maintained:

Voltage Range (Phase to Phase) *(kV = kilovolt (1000 volts) a unit of electrical potential difference)*	**Minimum Safe Crane or Load Clearance Distance (feet)**
to 50 kV	10 ft
> 50 to 200 kV	15 ft
> 200 to 350 kV	20 ft
> 350 to 500 kV	25 ft
> 500 to 700 kV	35 ft
> 700 to 1000 kV	45 ft
In transit with no lead and boom lowered	
<50 kV	4 ft
> 50 to 345 kV	10 ft
> 345 to 750 kV	16 ft
> 750 to 1000 kV	20 ft

- No part of the crane or load must ever enter the “prohibited zone” around live power lines.
  - The zone must be enlarged as the kV increases (see table above).
  - Certain environmental conditions, such as fog, smoke or precipitation may also require the distance to be increased.
- The crane should be set up as far as practically possible from the prohibited zone.
- To provide a constant reminder to all personnel, guard structures, or high visibility devices, should be erected around the power lines.

- A signal person must be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
    - The signal person's sole responsibility is to warn the operator whenever any part of the crane or load approaches the prohibited zone.
    - Radio communications must be used to ensure the signal person and the operator remains in constant contact.
- The work area must be barricaded and restricted to essential personnel only.
- Any overhead wire must be considered to be an energized line unless documentation is available to determine that the electrical lines are de-energized.
- No work may be performed within the prohibited zone unless all lines are de-energized.
- In the event of conflicting requirements based on the client or project scope, the more stringent requirements must be followed.

Emergency Response

If the crane comes in contact with a power line, the following procedures must be followed:

- Remain in the cab
- Do not panic, you should be safe as long as you stay at a constant voltage within the cab
- All personnel must be instructed to keep away from the crane and load, including anything attached to it such as hoist lines and tag lines.
    - The ground around the crane will also likely have been energized
- Try to disengage the crane from contact and move it an appropriate distance from the power line.
    - If contact cannot be broken the operator must remain in the cab until the lines can be de-energized.

Emergency Evacuation

If it is necessary to leave the crane cab before the lines are de-energized *(i.e. fire):*

- do not climb down – JUMP

- Do not contact the crane and the ground at the same time – this could be fatal
- Do not run or take long strides
    - electric current goes to ground in gradients and the voltage differential between gradients can kill.
- Slowly shuffle away or take short jumps with feet firmly together.
- Once clear of the crane seek medical attention for evaluation

Post Contact procedure

- Report contact with power lines to the utility company, project manager and safety department.
- Crane must be thoroughly inspected by authorized personnel for possible damage.

Attaching a load

- Know the weight of the load and the location to which it is being moved
- No crane is to be loaded beyond its rated capacity

Moving the load

The load must be well secured and properly balance in the sling or lifting device before it is lifted more than a few inches. Before starting the hoist, the hoist rope should not be kinked and the multiple part lines should not be twisted around each other. The hook should be brought over the load in such a manner as to prevent swinging. There should be no sudden acceleration or deceleration of the moving load. The load should not contact any obstructions.

- The operator will avoid carrying loads over people
- The operator will test the brakes each time a load approaching the rated load is handled. The brakes will be tested by raising the load a few inches and apply the brake.
- The load will not be lowered below the point where less than 3 full wraps remain on the hoisting drum

- The operator will not leave his position while the load is suspended. The operator needs to be aware of the appropriate chains, hoist and sling requirements.

Chains, Slings & Hoists

Safe Operating Practices (all slings, chains & hoists)

- Slings that are damaged or defective should be destroyed. Slings must not be shortened with knots, belts or other makeshift devices. Sling legs must not be kinked.
- Slings must not be loaded in excess of their rated capacities. They must be securely attached to their loads.
- Slings should be padded or protected from the sharp edges of their loads.
- Suspended loads must be kept clear of all obstructions. All employees must be kept clear of suspended loads and about to be lifted loads.
- Hands or fingers must not be placed between the sling and its load while the sling is being tightened around the load.
- A sling should not be pulled from under a load when the load is resting on the sling.

Alloy Steel Chain Slings

- All steel chain slings should have a permanently affixed durable identification stating size, grade, rated capacity and reach, and inspection date.
- Worn or damaged alloy steel chain slings or attachments should not be used until it is repaired.
- All steel chain slings with cracked or deformed master links, coupling links or other components should be removed from service.
- Alloy steel chain slings must be permanently removed from service if they are heated above 1,000*F.

Wire Rope Slings

- Fiber core wire rope slings of all grades should be removed from service if they are exposed to temperatures in excess of 200*F.
- Wire rope slings should be removed from service is any of the following is present:
    - Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay
    - Wear or scraping of one-third the original diameter of outside individual wires
    - Kinking, crushing, bird caging or any other damage is noted
    - Corrosion of the rope or end attachments
    - There is evidence of heat damage
    - End attachments are cracked, deformed or worn
    - It is determined that hooks have been opened more than 15 percent of the normal throat opening measured at the narrowest point or twisted more than 10 degrees from the plane of the unbent hook.

Metal mesh Slings

- Each metal mesh sling must have permanently affixed to it a durable marking that states the rated capacity for a vertical basket and choker hitch loadings
- If handles are used on metal mesh slings, the rated capacity must be at least equal to the metal fabric and exhibit no deformations after load testing. If handles are attached to fabric, they should be joined so that the rated capacity of the sling is not reduced, the load is evenly distributed across the width of the fabric, and the sharp edges will not damage the fabric.
- Metal mesh slings must not be used to lift loads in excess of their rated capacities. Metal mesh slings which are not impregnated with elastomers may be used in a temperature range of -20*F to 55*F without decreasing the working load limit. If the sling is impregnated with other materials, then the sling manufacturer recommendations must be followed.
- If mesh slings are repaired, they should not be used unless they are repaired by a metal mesh sling manufacturer. Once they are repaired, records must be

maintained to indicate the date and the nature of repairs and the person or organization that performed the repairs.

- Metal mesh slings must be immediately removed from service, is any of the following conditions are present:
    - A broken weld or brazed joint along the sling edge
    - A reduction in wire diameter of 25 percent due to abrasion or 15 percent due to corrosion
    - Lack of flexibility due to distortion of the fabric
    - A 15 percent reduction of the original cross sectional area of metal at any point around the handle eye
    - Distortion of the female handle so that the depth of the slot is increased more than 10 percent
    - Distortion of either handle so that they width of the eye is decreased more than 10 percent.

Natural & Synthetic Fiber Rope Slings

- Natural and synthetic fiber rope slings, except for wet frozen slings, may be used in a temperature range from 20*F to 180*F without decreasing the working load limit. For operations outside of this range, the manufacturer's recommendations should be followed. Fiber rope slings should not be spliced in any manner.
- Natural and synthetic fiber rope slings must be immediately removed from service if there is:
    - Abnormal wear
    - Powdered fiber between strands
    - Variations in the size or roundness of strands
    - Discoloration or rotting
    - Distortion of hardware in the sling
- Only fiber rope slings made from new rope must be used. Use of repaired or reconditioned fiber rope slings is prohibited.
- Each sling should be marked or coded to show the rated capacities for each type of hitch and type of synthetic web material.
- Nylon web slings should not be used where there are fumes, vapors, sprays, mists or liquids of acid or phenol present.

- Polyester and poly propylene web slings must not be used where fumes, vapors, sprays, mists or caustics present.
- Web slings with aluminum fittings must not be used where fumes, vapors, sprays, mists, or liquid caustics are present.
- Synthetic polyester web slings should not be used with temperatures in excess of 180*F. Polypropylene web slings should not be used at temperatures in excess of 200*F.
- Synthetic web slings must be immediately removed and destroyed if there are:
    - Acid or caustic burns
    - Melting or charring of any part of the sling surface
    - Snags, punctures, tears or cuts
    - Broken or worn stitches
    - Distortion of fittings

Personal Protective Equipment

All employees who handle the wire slings and the hoist cables must wear leather gloves to prevent any hand injury.

Mobile Cranes

The employing department must comply with the manufacturer's specifications and limitations applicable to the operation of any or all cranes and derricks. The attachments that are used with a crane must not exceed the capacity, rating or scope recommended by the manufacturer. The rated load capacities recommended operating speed and special hazard warnings or instruction must be conspicuously posted on all equipment.

The requirements are:

- A designated competent person will inspect all machinery and equipment prior to each use and during use, to make sure that it is safe operating condition. If a defective part is found, all parts must be repaired or replaced.
- A thorough annual inspection of the hoisting machinery must be made by a competent person. The dates and the result of the inspections for each hoisting machine and piece of equipment will be maintained. A certification record which will include the date the crane items were inspected and serial number or other identifier for the crane that was

inspected. The most recent certification will be retained on file until a new one is prepared.

- All accessible areas within the swing radius of the rear of the rotating superstructure of the crane must be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.
- All exhaust pipes must be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.
- All windows in cabs must be safety glass or equivalent. There should be no visible distortion that will interfere with the safe operation of the machine.
- Guard rails, handholds and steps must be provided on cranes for easy access to the car and the cab.
- Platforms and walkways must have anti-skid surfaces.
- An accessible fire extinguisher of 5BC rating or higher must be available to all operator stations or cabs of equipment.

Rigging

Rigging operations are an ongoing critical aspect to risk reduction and can only be performed by a qualified rigger who has completed training and assessment provided by the Crane Institute of America or other accredited organization. The qualified rigger must inspect all rigging gear for compliance to requirements. Whenever possible, an approved third party provider will be used to provide rigging services for work deemed more advanced than routine.

Rigging Practices

The following requirements will apply to rigging practices and will be reviewed by personnel responsible for the lift, prior to proceeding with rigging operations:

Rigging basics

- Know the weight of the load
- Know the load's center of gravity
- Make attachments above the center of gravity
- Select rigging methods that will hold and control the load
- Know rated capacities of slings, hardware and hoisting device
- Select slings and hardware best suited for the lift

- Inspect all rigging gear prior to use and during use
- Protect slings from sharp edges by use of softeners
- Protect load from rigging, if necessary
- Allow for sling angles
- Do not use homemade rigging devices
- Attach tag lines prior to lift
- Keep personnel clear of lift area
- Lift load a few inches and re-check rigging
- Start and stop slowly
- Watch for obstructions and power lines
- Do not forget the law of gravity

Additional Requirements

- Personnel responsible for the lifting operation will inspect all rigging gear prior to use to assure compliance with the requirements listed.
    - Documented rigging inspections will be performed monthly and documented on the appropriate form
- Less that 3/8 steel wire chocker will not be used
- All lifts regardless of weight or size must have a minimum (1) tag line attached and used to prevent lateral movement
- Tag lines must be rope – 10’ minimum length – ½” minimum diameter
- Homemade rigging devices are prohibited
- Chain falls must be properly lubricated and not rusty

Training

- Training must be completed prior to use of Crane. Certification of Crane operators and Riggers will include classroom instruction, hands-on training and hands-on evaluation.
    - Certification will be granted by an accredited facility per 21 CFR 1926.1427.
- Training will cover the following:

    - The purpose and use of the equipment manual(s)
    - A pre-start inspection

  - Responsibilities associated with problems or malfunctions affecting the operation of the crane.
  - Factors affecting stability
  - The purpose of placards and decals
  - Workplace inspection
  - Applicable safety rules and regulations
  - Authorization to operate
  - Operator warnings and instructions
  - Proper use of personal protective equipment
  - Hand signals
  - Capacity and load limits

- Trainees must successfully complete hands-on training and a hands-on evaluation before being allowed to operate a crane independently. Trainees will be given adequate supervision and time to learn basic operating skills.
- Documented re-evaluation of each crane operator will be completed a minimum of once every two years.
- Refresher training in relevant topics will be provided when any of the following occur:

  - The operator has been observed to be operating in an unsafe manner
  - The operator has been involved in an accident or near miss
  - The operator is assigned to operate a different type of equipment
  - A condition in the workplace changes in a manner that could affect safe operation of the equipment

Purpose

To review and require that subcontractor safety programs, training, procedures and initiatives coordinate with the company's own standards of safety.

This process is intended to help ensure that, in the event subcontractors are utilized by the company as part of a work project, each subcontractor's safety programs, OSHA compliance, training, documentations and statistical result of previous safety performance are in accordance with requirements of the company.

Scope

Under this program, any subcontractor will be reviewed and qualified by the company prior to performing work as a part of a company project.

Safety & Health Requirements

Pre-qualification by the company will include the review of the subcontractor's:

- OSHA300 log for the previous 5 years
- OSHA experience regarding any previous inspections or citations
- Written safety and health programs as required by the company and/or the respective host facility/client/general contractor
- Written procedures for at-work incident, injury, illness, and emergency response, reporting and investigations requirements.
- Workers compensation insurance EMR information
- Proof of insurance documented by a current certificate of insurance from the subcontractor's insurance agent(s)
- Documentation of required safety training of subcontractor's employees that will be assigned to the respective project, including supervisor, competent person training and site safety representative training
- Documentation of required Operator Qualification and other individual qualifications or certifications as may be required by the project; and
- Documentation as may be available to explain the subcontractor's previous safety performance using a statistical method

Review and evaluation will be performed by the company Safety Department

Written materials, submissions, results, and documentations of subcontractor pre-qualification reviews will be maintained by the Safety Department in a file and updated annually as appropriate.

Measurements of Workplace Safety & Health Results

To manage a process or system, you must be able to measure it. This is why the company measures safety performance and results as a tool toward identifying and eliminating hazards, mitigating risks, and protecting employees and other individuals from workplace injuries and illnesses.

Subcontractor workplace safety performance will be evaluated through job site inspections. Noncompliance identified during inspection will be documented in the electronic inspection database. Subcontractor performance and trending will be sent to operational leadership monthly.

- For the purpose of this program, a safety metric will be considered as any such measurement of safety performance and injury/illness/incident prevention results.
- Specific safety metrics to be considered during subcontractor pre-qualification will include but are not limited to items above.
- Safety metrics will be utilized to help evaluate when, where and how safety programs and initiatives have been successful, and also to identify areas that require additional attention.
- Subcontractors safety performance will be reviewed and evaluated in part through comparison of the subcontractor's safety metrics with levels of accomplishment as identified by the company.
- Subcontractors that evidence safety metrics that are not in accordance with project requirements will not be utilized for that specific project; or they will be utilized in roles and assignments that have lower levels of risk and are acceptable to the company and host employer.
- All determinations of acceptability of a subcontractor's safety metrics, as requested and reviewed in accordance with this program, will be made by the

company and/or the host employer or general contractor for the respective project.

Inclusion & Participation of Subcontractors in Project Safety Initiatives

- Subcontractors assigned by the company to a project will attend initial safety and planning meetings, project safety orientations, incident, injury and illness response planning and coordination meetings.
- Subcontractor personnel will participate in these, and other such activities as required in preparation for working safely at the project location.
- Subcontractor personnel will utilize, cooperate with, attend, and support all pertinent components of safety programs and procedures; safety orientation, training, tailgate and daily meetings; qualification and/or certification requirements; periodic safety meetings and awareness activities; safety inspections; incident reporting and investigation procedures; and other such safety, health and incident prevention initiatives as may be established for all workers at the project location.
- Subcontractor personnel will participate in and cooperate with Daily Job Hazard Analysis as established for the project workplace.

Requirements for Reporting Hazards, Incidents, Injuries, and Illnesses

- Subcontractor employees are responsible for reporting any observed near-miss, hazard or unsafe behavior of another person when there is a potential for causing an incident, chemical release, injury or illness in the project workplace.

    - First report will be made to the subcontractor's on-site supervisor or such report to the company contact person if the supervisor is not readily available. Reporting should be made without delay to help facilitate intervention and preventive measures.

- Subcontractor supervisors and/or management will forward any such report to the company contact person so that additional communication can be made and/or actions taken if the company deems necessary.

- Any on-the-job injury or illness that required medical attention by t physician or professional medical provider will be reported immediately to the company contact person after individual(s) requiring treatment are in route to the medical care.

- Subcontractors will investigate near-misses, first aid injuries, and incidents, injuries or illnesses in the project workplace in accordance with requirements established for the project.

Post-project Review of Subcontractor Safety Performance and Results

- On conclusion of a project, the company will make a timely review of each subcontractor's safety performance, incident and injury experience, and other factors that will be helpful in evaluating the subcontractor's suitability for future projects.

- In the event that a subcontractor exits or is terminated from a project that remains in progress, a similar timely review as described in the above will be performed.

- Post-project evaluations will be performed by the company Safety Manager in coordination with company managers and supervisors who worked with the subcontractor during the specific project under review.

Purpose

To provide information necessary to ensure that employees of the company are knowledgeable in the prevention and recognition of heat stress to ensure their own safety and the safety of others.

Scope

The provisions of this program apply to all company employees.

Responsibilities

Safety Professionals

Shall provide technical guidance to ensure compliance to all regulatory standards related to PPE.

Shall provide technical guidance to ensure the proper heat prevention PPE is purchased for use by field personnel.

Shall deliver required Heat Illness training to include contents of this procedure.

Shall manage PPE inventory to ensure availability for field personnel.

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning Heat Illness Prevention Policy.

Superintendents

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning the Heat Illness policy.

Foreman

Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning PPE use.

Employees

Shall be accountable for their own safety performance and therefore shall comply with this procedure.

Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers' behavior.

6. Detailed Procedure

Heat related illnesses are avoidable if employees are trained and the right actions are taken before, during and after working in either indoor or outdoor hot conditions. High temperatures and humidity can stress the body's ability to cool it making heat illness a big concern during hot weather months.

Every employee whose job duties require them to work outdoors during summer months, are exposed to elevated heat conditions and therefore are susceptible to heat illness.

A hazard analysis must be completed identifying possible measures that can be put in place to minimize heat exposure and impact. Supervisors must consider personal factors associated with their employees to help in determining the appropriate task to be assigned with regard to heat exposure.

The three major forms of heat illness are heat cramps, heat exhaustion, and heat stroke.

Heat Cramps

Heat cramps are the most common type of heat related injury and probably have been experienced by nearly everyone at one time or another.

- Symptoms
  - Muscle spasms which usually affect the arms, legs or stomach.
  - Frequently do not occur until sometime later after work, at night or when relaxing.
  - Caused by heavy sweating, especially when water is not replaced quickly enough.
  - Cramps can be quite painful but usually don't result in permanent damage.

- Prevention
  - All employees must have access to and drink plenty of potable drinking water. Electrolyte solutions such as Gatorade may also be made available
  - All employees must have access to shade and are encouraged to take frequent breaks from the heat as appropriate.

- First Aid
  - Contact your supervisor immediately if someone becomes ill

Heat Exhaustion

Heat exhaustion is more serious than heat cramps. It occurs when the body's internal temperature regulating system is overworked but has not completely shut down. In heat exhaustion, the surface blood vessels, and capillaries, which originally enlarge to cool the blood, collapse from loss of body fluids and necessary minerals. This happens when you do not drink enough fluids to replace what you are sweating away.

All supervisors must be trained and knowledgeable in symptoms, prevention and first aid for heat exhaustion.

- Symptoms
  - Headache
  - Heavy sweating

- Intense thirst
- Dizziness
- Fatigue
- Loss of coordination
- Nausea
- Impaired judgment
- Loss of appetite
- Hyperventilation
- Tingling in hands or feet
- Anxiety
- Cool moist skin
- Weak and rapid pulse rate (120 -2000)
- Low to normal blood pressure.

- Prevention
  - All employees must have access to and drink plenty of potable drinking water. Electrolyte solutions such as Gatorade may also be made available
  - All employees must have access to shade and are encouraged to take frequent breaks from the heat as appropriate.

- First Aid
  - Any employee suffering from the above symptoms should be moved to a cool location such as a shaded area or air-conditioned building.
  - Have them lie down with their feet slightly elevated. Loosen their clothing, apply cool, wet cloth's, or fan them.
  - Have them drink water or electrolyte drinks.
  - Try to cool them down and have them checked by medical personnel.
  - Victims of heat exhaustion should avoid strenuous activity for at least a day and continue to drink eater to replace lost body fluids.

  Call emergency response if the person becomes non-responsive, refuses water, vomits, or loses consciousness.

Heat Stroke

Heat stroke is a life-threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the victim's core body temperature rises

to deadly levels. A heat stroke victim may first suffer heat cramps and/or heat exhaustion before progressing into the heat stroke stage, but this is not always the case. It should be noted that, on the job, heat stroke is sometimes mistaken for a heart attack. It is therefore very important to be able to recognize the signs and symptoms of heat stroke, and to check for them anytime an employee collapses while working in hot environments.

- Symptoms

  - high body temperature close to 103°F
  - a distinct absence of sweating (usually)
  - hot red or flushed dry skin
  - rapid pulse
  - difficulty breathing
  - headache
  - nausea
  - vomiting
  - confusion

  More severe symptoms include:
  - bizarre behavior
  - high blood pressure

  Advanced symptoms include:
  - seizure or convulsions
  - collapse
  - loss of consciousness
  - body temperature of over 108°F.

  Call emergency response if the person becomes non-responsive, refuses water, vomits or loses consciousness.

- Prevention
  - All employees must have access to and drink plenty of potable drinking water. Electrolyte solutions such as Gatorade may also be made available.
  - All employees must have access to shade and be allowed to take frequent breaks from the heat as appropriate.

- Recognize signs of heat cramps and heat exhaustion

- First Aid

  - It is vital to lower a heat stroke victim's body temperature. Quick actions can mean the difference between life and death.
  - Pour water on them, fan them, or apply cold packs.

  Call emergency response personnel to get person medical aid as soon as possible.

Environmental & Physical factors

- The following have been identified as potential environmental and physical factors at the facilities and worksite they can contribute to heat related hazards:
  - Heat and humidity during the hot months of June, July, August, and September
  - Radiated heat from equipment and/or materials
  - Heavy clothing including boots and gloves
  - Body harness for fall protection, which restrict air circulation
  - Limited air circulation in non-climate-controlled facilities

  Physical work factors will be taken into consideration before performing task. Risks and appropriate preventive measures will be documented on the daily Job Hazard Analysis and communicated with all employees performing tasks.

Hazard Analysis

- Each Supervisor will perform a job hazard analysis at the start of each work shift to identify and evaluate heat related hazards specific to the day's task(s) and appropriate precautions.
  - The JHA will be reviewed with all employees
    - Employees will sign in acknowledgment and understanding of the hazards and precautions and/or PPE required

- The following measure must be in place as appropriate to control the effects of identified factors which can contribute to heat related illness:

  - Supervisors will use a positive means if timing water breaks, that signals workers it is time to drink about a cup (8oz) of water or electrolyte drink

- At the start of the workday supervisors will identify an adequate area of shade
    - If no shade is available, a canopy will be available
- Supervisors will ensure cool bands are prepared ready for use by personnel on site
- Supervisors will add at least one additional rest break during the first and second halves of the workday and will instruct workers to rest while sitting in the shade and not standing up or walking and not in the sun
- In extreme temperatures supervisors will instruct workers to use the buddy system to watch out for each other
- Extra water / drink coolers will be provided
- Fans and air movers will be provided as appropriate

Training

- All training shall be delivered by safety professionals to Leadership. Same training shall be delivered by the Leaders to their respective crews.

- Training records must include the trainee's name, date of training, instructor's signature and verification of understanding and must be retained for the length of the employee's service with the company.

- Re-training of personnel is required when:
    - A person changes job assignment.
    - The process or equipment changes and presents new hazards.
    - Following a periodic review of the use of the program with all employees involved.
    - When performance dictates more frequent training is needed
    - Annually

- Re-training must be documented and include the trainee's name, date of training, instructor's signature and verification of understanding.

- <u>Supervisors will be trained in identification of hazards and preventing heat related illness prior to supervising employees.</u>

Purpose

To establish accepted practices for respirator use, providing guidelines for training and respirator selection, proper storage, use and care of respirators.

Scope

This program applies to all employees who are required to wear respirators during normal work operations, as well as during some non-routine or emergency operations, such as spill of hazardous substance.

Responsibility

- Safety department –
    - Identify work areas, process or tasks that require workers to wear respirators
    - Evaluating hazards
    - Selecting respiratory protection options
    - Monitoring respirators use to ensure that respirators are used in accordance with their specification
    - Arranging for and/or conducting training
    - Ensuring proper storage and maintenance of respiratory protection equipment
    - Conducting qualitative fit tests
    - Administering medical surveillance program
    - Maintaining records
    - Evaluating the program
    - Updating the program as needed
    - The Safety manager will serve as the designated program administrator
- Supervisors –
    - Supervisors are responsible for ensuring that the respiratory protection program is implemented in their areas of responsibility. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge.
      Duties of the supervisor include:
        - Ensuring that employees under their supervision (including new hires) receive appropriate training, fit testing, and annual medical evaluation

- Ensuring the availability of appropriate respirators and accessories
- Being aware of tasks requiring the use of respiratory protection
- Enforcing the proper use of respiratory protection when necessary
- Ensuring that respirators fit well and do not cause discomfort
- Continually monitoring work areas and operations to identify respiratory hazards
- Coordinating with the Safety department on how to address respiratory hazards or other concerns regarding this program

- Employees –
  - Each employee is responsible for wearing his or her respirator when and where required and in a manner in which they are training. Employees must also:
    - Care for and maintain their respirators as instructed, guard them against damage and store them in a clean sanitary location
    - Inform their supervisor if their respirator no longer fits well, and request a new one that fits properly
    - Inform their supervisor or the safety department of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding this program.
    - Use the respiratory protection in accordance with the manufacturer's instructions and the training received

Program

- The safety department will perform a pre-project assessment to determine when respiratory protection will be required.

- If an exposure is identified, the safety department will evaluate the exposure to and prescribe the appropriate respiratory protection to be worn.

  - NIOSH certified respirators are selected based on hazard exposures.

  - Medical evaluation to include pulmonary and fit testing will be performed by a licensed health care professional prior to use.
    - Medical evaluations will be confidential
    - Medical evaluations will be convenient, understandable, and performed during normal working hours

- Each employee will be provided the opportunity to discuss the results of their medical evaluation with the licensed health care professions if requested

- Employees cannot wear tight-fitting face pieces if the seal is broken because of facial hair, glasses etc.

- Required respirator equipment will be provided to employees that may be exposed to harmful vapors or oxygen deficient atmosphere by the company at no cost to the employee.

- All employees who are required to use respirator equipment are responsible to:

  - Leave the area of exposure to wash or change cartridges if a breakthrough or resistance is detected
  - Maintain respirator equipment in a clean and sanitary condition
  - Inspect respirator equipment prior to use
  - Store respiratory equipment to maintain condition, cleanliness, and sanitary condition

Training

- All employees who are required to use respiratory equipment will be trained and competent to properly use, maintain and store the equipment that is assigned to them.

- Training will be completed prior to performing tasks requiring respiratory equipment and annually thereafter.

- Training will be documented and maintained in the employees training file.

Lead Awareness	**Chapter:**	30
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 6
	Approved:	Safety Department

Purpose

The purpose of this program is to identify precautions to be used during all projects where employees may be exposed to lead. The goal is to reduce employee lead exposure to the lowest feasible level. Any deviation from procedure must be authorized, in writing, by the safety department.

Scope

This program applies to all Company employees whose work activities may contact lead containing materials but do not disturb the material during their work activities.
Employees may be exposed to lead in a variety of construction activities:

- Painting
- Cutting
- Welding
- Rivet busting
- Paint removal
- Abrasive blasting

When work is performed on a non-owned or operated site, the operator's program must take precedence unless an operator's program does not exist or is less stringent.

When work is performed on a multi contractor worksite, employees will be protected from exposure.

Responsibility

- Managers & Supervisors
  - Ensure personnel are aware of work that has the potential of exposure to lead
  - Inform the Safety Manager of upcoming work involving known or suspected lead-containing materials so that any necessary monitoring or other required actions may be provided
  - Ensure that employees comply with the lead awareness requirements

- Safety Manager
  - Coordinate annual lead awareness training activities

- Employees
  - Comply with the lead awareness requirements and direct any questions to the Safety Manager
  - Attend required annual training
  - Review material safety data sheets or consult with the supervisor to identify any container with lead containing materials

Definitions

- Action Level (AL) – 30 micrograms per cubic meter (ug/M3) 8 hour time weighted average exposure

- Bulk Sample – Sample of material removed from the work structure and sent to a lab for analysis

- Lead containing materials – any materials that have detectable amounts of lead

- Permissible Exposure Limit (PEL) – 50 micrograms per cubic meter – 8 hour time weighted average exposure

- Regulated Area – Areas where lead concentrations exceed the AL

- Competent Person (CP) – On-site person responsible for overseeing safety and health on the project

Exposure Assessment

- **Mobilization Phase**
  (1) During Mobilization, an Employee Lead Exposure Assessment will be conducted. The assessment will review all job tasks to determine if there is a potential employee lead exposure.

  Potential for lead exposure will be based on:
  - OSHA list of assumed exposure levels [1926.62(d)]
  - Historical monitoring data
  - Professions judgment of CP, Safety Manager or CIH consultant

  (2) For job tasks that may create employee lead exposure, the assessment will include:
  - Equipment and materials used
  - Estimated crew size
  - Employee work procedures and responsibilities
  - Maintenance procedures

- **Work Phase**
  Within twenty-four (24) hours after the start of operations, on-site air monitoring will be conducted to determine the actual exposures of all employees identified in the lead exposure assessment.

  Samples will be collected by a person qualified to do so; qualified people include:

- Competent Person
- Safety manager
- CIH or individuals working under their supervision

All samples will be collected and analyzed using a laboratory that is accredited

Air monitoring will be repeated whenever the CP determines that an employee's exposure has changed significantly

- At a minimum all employee whose exposure exceeds the AL will be re-monitored every three (3) months.

Employees will be notified in writing of their sample results within five (5) days of receipt of the results.

Engineering Controls

It is the Company policy, and an OSHA requirement, that engineering controls will be used to the maximum extent possible, even if it does not reduce exposures below the PEL.

- All job tasks with exposures above the PEL will be reviewed for feasible engineering controls.
- Based on the above review, a list of all engineering controls to be used on the jobsite will be developed. This list will include:
- Plans, drawings, diagrams, and engineering calculations
- Engineering controls to be used
- Engineering controls found to be infeasible
    - Documentation on unfeasibility will be maintain by the project superintendent
    - Prior to start of the job, a schedule for implementation of should be immediately upon start of the job task.

Administrative Controls

If engineering controls cannot reduce employee exposure below the PEL, administrative controls will be implemented to the extent feasible:

- Rotation schedules will be developed
- Rotation schedules will be posted on the job bulletin board, at the job trailer and announced to employees during Lead training

Respirators

Respirators will be used whenever engineering and administrative controls are not sufficient to reduce employee exposure below PEL.

- Respirator use will follow the Respiratory Protection program in this manual.
- Respirators will be chosen based on the Exposure Assessment conducted
- Abrasive blasting on lead containing materials will only be done using Type CE, positive pressure respirator

Protective Equipment

All employees are required to wear worker protective clothing (WPC) when exposure exceeds the PEL.

- The use of disposable or reusable coveralls will be determined for each project.
- Each project will determine if employees will be allowed to wear street clothes under WPC
- Only flame-resistant coveralls will be allowed for hot work
- WPC will be changed our based on exposure
    - WPC will be changed out immediately upon discovery of rips, tears, holes, or other damage that would allow led to contaminate the worker
- Dirty clothing will be immediately disposed of in sealed containers.
    - Containers must be labeled
- As required by the situation, other PPE may be selected in accordance with the PPE program

Hygiene

Wash facilities will be available at all sites where employees are exposed to lead, regardless of the exposure level.

- All employees exposed to lead must wash face and hands prior to breaks, lunch and at the end of their shift
- Employees exposed to or handling lead containing materials may not eat, drink, use tobacco products or apply cosmetics until hands and face have been washed
- Food, drink, tobacco products and cosmetics may not be brought into any regulated area.
- A specific “clean area” will be designated for breaks and eating/drinking.

Medical

- Common symptoms of acute lead poisoning are loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty sleeping, fatigue, moodiness, headache, joint or muscle aches and anemia.
- Long term (chronic) overexposure to lead may result in severe damage to the blood-forming, nervous, urinary and reproductive systems.
- Baseline blood tests will be done for all employees who may be exposed to lead above AL at any time on a project
- Blood tests will be repeated for all employees exposed above the AL more than 30 days per year
- Employees will be notified of the blood test results in writing within five (5) days of receipt of the results from the lab

Training

- All employees assigned to a jobsite with potential lead exposures will receive lead awareness training

Recordkeeping

The following documentation is maintained and available throughout the project:

- Employee exposure assessment data
- Employee air monitoring results
- Documentation on feasible and selection of engineering, administrative and respiratory controls
- All medical records
- Training records
- Results and follow-up reports from all walkthrough and site inspections

Purpose

The purpose of this program is to establish minimum requirement for H2S safety, which will enhance safety in areas where hydrogen sulfide is present or is recognized as being potentially present.

Scope

This program applies to all Company employees whose work activities may contact H2S.
When work is performed on a non-owned or operated site, the operator's program must take precedence unless an operator's program does not exist or is less stringent.

Definitions

- Contingency Plan – a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide
- Exposure Level – permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average
- Gas Detector Instrument – An instrument/detector to measure levels of H2S. Instruments may be electronically or manually operated
- Hydrogen Sulfide (H2S) – is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
    - It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide
    - It has the odor of rotten eggs at low concentrations
    - In higher concentrations rapidly paralyze the olfactory nerves (sense of smell)
    - Is soluble in water and is flammable and poses a definite threat of explosion

- Parts per Million (PPM) – parts of vapor or gas per million part of contaminated air by volume
- Personal H2S Monitor – an electronic instrument worn on a person that is set to alarm in 10 PPM of H2S
- Venting – the process of discharging a material to the atmosphere through a series piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure

Procedure

- Physical Effects of Hydrogen Sulfide
  - H2S paralyzes the sense of smell. Do Not Rely on Smell to Detect H2S – Rely strictly on instruments designed to measure concentrations of H2S
  - Hydrogen sulfide is a very dangerous and deadly gas – it is colorless and heavier than air
  - It can accumulate in low places and in small concentration it has a strong, pungent, somewhat distasteful odor similar to rotten eggs. In higher concentrations, it can deaden the sense of smell
  - Exposure to certain concentrations of H2S can cause serious injury or death

- Toxic Effects of Hydrogen Sulfide

Concentration	Physical Effect
.01 PPM	Can smell odor
10 PPM	Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA)
100 PPM	Immediately Dangerous to Life or Health (IDLH). Kills smell in 3 – 15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours
200 PPM	Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1 – 2 hours exposure
500 PPM	Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control
700 PPM	Unconscious quickly; death will result if not rescued promptly.
1000 PPM	Unconscious at once, followed by death within minutes

- General

  HWH has a confined space program in this manual, requirements apply as appropriate.
  - Each person entering an H2S location, regardless of concentration, will wear a personal H2S monitor that is set to alarm at 10 PPM and must carry a 5-minute escape pack with them at all times.

- Safe Work Procedures

  Employees may perform services for clients/customers in workplaces that may present exposures to hydrogen sulfide (H2S).

  These conditions may be encountered during excavation and line repair or tank (vessel) maintenance and inspection.
    - Maintain compliance with permit requirements and any specific client requirements

- Verify that proper safety equipment is available, functioning properly and is utilized
- Check and remain aware of wind conditions and direction
- Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity
- Check for other personnel and ignition sources
- Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities
- Keep all non-essential personnel away from work areas
- Immediately evacuate the area when any H2S monitor sounds and do not re-enter without proper respiratory protection

- Equipment

  The following equipment will be provided and used as required by this program:

  - Person H2S monitor set to alarm at permissible exposure limit of 10 PPM for OSHA 1926 requirements and 20 PPM for OSHA 1910 requirements. Fixed monitors may be present as well at the same alarm setting.
  - Portable H2S gas testing instrument capable of testing the suspected concentrations of H2S in the system.
  - Each testing instrument must be capable of testing the suspected concentrations of H2S by using the manufacturer's recommended calibrated tube or other means of measuring the concentration of gas.
  - Testing instruments will be calibrated periodically according to the manufacture's recommendation, and at least annually.
  - Calibration kits with regulator for calibrating the personal monitor
  - Calibration gas cylinder for testing personal monitors
  - Respirators will be provided as appropriate for the work environment

- Medical

  Each employee will complete a medical evaluation to determine the employee's ability to wear a respirator as required by the Respiratory Program.

- Training

  Employees required to work on H2S locations will be trained. Training will consist of:

  - Signs and symptoms of H2s exposure
  - Work procedures
  - Person Protective Equipment required around H2S
  - Use of contingency plans and emergency response
  - State and federal regulatory requirements
  - Rescue techniques, first aid and post exposure evaluation
  - Use, care and calibration of personal monitors and gas detection instruments
  - Respirator inspections and recordkeeping

Each respirator wearer will complete Respiratory protection training and a respirator fit test after being given medical clearance.

Purpose

The purpose of this program is to establish requirements for spill control and response.

Scope

This program applies to all Company employees whose work activities may contact H2S.

When work is performed on a non-owned or operated site, the operator's program must take precedence unless an operator's program does not exist or is less stringent.

Procedure

Control Plan
In addition to good housekeeping and material management practices, the following practices will also be followed for spill prevention:

- Manufacturers recommended methods for safe storage including recommendations for stacking height of materials shall be strictly adhered to.
- Manufacturers recommended methods for spill cleanup shall be followed. A spill kit will be maintained in applicable area(s) for immediate response.
- Based upon the provided list of materials on site that have a potential of spillage, the following equipment and materials will be utilized to contain and clean up any spills: brooms, dust pans, shovels, mops, rags, absorbent pads, protective gloves, disposable coveralls, goggles, respirators, dust masks, kitty litter, sand, plastic and metal trash containers and liners specifically for this purpose.
- This spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring. A description of the spill, what caused it and the cleanup measures will also be included.
- The project superintendent or site foreman will be the spill prevention and clean up coordinator. He will designate site personnel who will receive spill control and response training. These individuals will be responsible for a particular phase of prevention and clean up.
- During the process of equipment re-fueling, absorbent pads and or drip pans will be placed beneath the fill area to prevent any spilled material from contacting the ground. During fluid changes (engine oil, hydraulic oil, coolant, etc.) equipment will be moved to a designated area for servicing.

Response Plan
Every preventive measure will be taken to keep contaminated of hazardous materials contained.

The project superintendent or site foreman will be the person responsible for ensuring adherence to the Spill control plan and for implementing and supervising the containment and cleanup in the event of an unforeseen spill of a substance. The project superintendent, site foreman or designee will work with the appropriate environmental service infrastructure as necessary.

Spill kits adequate for any anticipated spills will be maintained by the site foreman/superintendent.

If a release occurs, the following actions will be taken:

- Stop the spill.
  - All spills will be contained and cleaned up immediately after discovery.
  - Absorbent pads or materials will be used to soak up any spilled material.
  - Any soil that becomes contaminated will be shoveled up and placed in protective containers and identified for proper disposal.
- Warn others immediately
  - Notify co-workers and subcontractor personnel of the release.
- The area will be isolated, preventing access to the area and continue to minimize the spread of the material.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substance.
- All spills of toxic or hazardous material will be reported to the fire department.
  - The compliance manager will make the appropriate notifications the federal or local agencies as appropriate.

Contaminant Prevention

An inventory list of hazardous chemicals will be maintained on site. The inventory list will be updated each time a new hazardous chemical arrives on site. The current list will be filed with SDS sheets.

- When chemicals arrive on site, a copy of the SDS will be filed.
  - Copies of the SDS for all hazardous materials are readily accessible to employees at the project site during all work shifts
  - A list of all SDS's is filed alphabetically by common name and updated as new SDS's come into the facility.
- First aid and safe material handling will be reviewed with each effected employee prior to performing work on site.

Purpose

The purpose of this program is to identify areas of high noise levels, take measures to reduce the noise and to prevent hearing loss due to noise exposure.

Scope

This program is mandatory for all areas of operation that equal or exceed an 85dBA time weighted average for 8 hours.

The requirements will apply to all employees, visitors and contractors.

When work is performed on a non-owned or operated site, the operator's program must take precedence unless an operator's program does not exist or is less stringent.

Procedure

It is the policy of this company to approach its hearing conservation program as a safety preventative program. The primary goal of this program is the prevention of hearing loss. Other goals include compliance with OSHA guidelines.

Monitoring for noise exposure levels will be arranged by the Safety Department when noise levels are suspected of equaling or exceeding 85dBA.

Monitoring will be performed with the use of sound level meters and personal dosimeters at the discretion of the Safety manager.

Records of all monitoring activities will be maintained in the safety department and will include the following:

- type of monitoring
- date(s) completed
- results of monitoring activities

Appropriate hearing protection will be worn as specified during project planning. Hearing protection will be worn when it will provide greater safety and protection benefits.

Equipment or areas with noise levels equal to or exceeding 85 dBA will be identified with labels or signs, which will be posted on the individual pieces of equipment (whether owned or leased) or at the entrance to noisy areas.

Whenever practical, noise levels identified as exceeding 85 dBA will be reduced by means of engineering or administrative controls, including isolation, enclosure and application of noise-reduction materials.

Noise reduction ratings (MRRs) must be considered when selecting the type of hearing protection (ear plugs, earmuffs or both) for a particular job.

Management, supervisors, and employees must properly wear the prescribed hearing protection while working or traveling through any area that is designated as a high noise area.

Hearing protection will be provided at no cost to employees who perform tasks designated as having high noise exposure and replaced as necessary.

Only company approved hearing protection will be used.

Personal stereo headsets or ear buds are not approved for hearing protection and are not permitted on job sites.

Foreman and supervisors are responsible for ensuring:

- hearing protection is used in areas or operations where such use is required

- Affected employees receive appropriate training

- High noise areas and equipment are identified and labeled accordingly

Hearing protection will be worn at all times when noise levels are suspected of equaling or exceeding 85dBA.

Each employee is responsible for:
- Following the instructions received during training

- Wearing proper hearing protection when required

Audiometric testing will be implemented for all employees whose exposures equal or exceed the 8-hr TWA of 85 dBA.

Baseline audiogram for each exposed employee will be completed within 6 months of exposure to work related noise.

- Baseline testing will be performed only when a period of at least 14 hours without exposure to work related noise is provided.
    - Annual audiometric testing will be provided for all exposed employees.

- If a standard threshold shift occurs, the employee will be notified within 21 days of determination; medical evaluation will be arranged if appropriate.
    - In the event of a standard threshold shift, current hearing protection will be re-evaluated and/or re-fitted as appropriate.Records of audiometric testing including date and results will be maintained in the safety department.

Employees will be provided training a minimum of annually

- Training will be required with all affected employees when PPE requirements or work processes change

- Training records will be maintained in the safety department and include the following:
    - date of training
    - training program content
    - employee's name
    - trainer's name
    - length of training

Benzene Awareness	**Chapter:**	34
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 3
	Approved:	Safety Department

Purpose

The Benzene Awareness Program is essential to the safety of our employees. The purpose of the Benzene Awareness Program is to inform personnel of the dangers of Benzene.

Scope

- This program applies to all Company employees whose work activities may contact Benzene.
    - When work is performed on a non-owned or operated site, the operator's program must take precedence unless an operator's program does not exist or is less stringent.

Physical and Chemical Characteristics

- Benzene is a clear, colorless liquid with a distinctive sweet odor. Its boiling point is 176 degrees F and its flash point is 12 degrees F. The flammable limits in air are 1.3% for the low end and 7.5% for the high end.
- Benzene is a flammable liquid. Its vapors can form explosive mixtures. All ignition sources must be controlled when Benzene is used, handled or stored. Where liquid or vapor may be released, such areas shall be considered as hazardous locations.
- Benzene vapors are heavier than air; thus the vapors may travel along the ground and be ignited by open flames or sparks at locations remote from the site where Benzene is handled. No smoking designated area and fire extinguishers must be readily available.
- Benzene is classified as a 1 B flammable liquid for the purpose of conforming to the requirements of 29CFR 1910.106. A concentration exceeding 3,250 ppm is considered a potential for explosion hazard. Locations where Benzene may be present in quantities sufficient to produce explosive or ignitable mixtures are considered Class I Group D for the purposes of conforming to the requirements of 29 CFR 1910.309.
    - Fire extinguishers must be readily available in areas where Benzene is used or stored.

Exposure and Health Effects

- Locations where Benzene exposure can occur:

    - Petroleum refining sites
    - Tank gauging (tanks at producing, pipeline & refining operations)
    - Field maintenance

- Benzene is primarily an inhalation hazard. Systemic absorption may cause depression of the hemopoietic system, pancytopenia, aplastic anemia and leukemia. Inhalation of high concentrations can affect central nervous system function. Aspiration of small amounts of liquid Benzene immediately causes pulmonary edema and hemorrhage of pulmonary tissue. There is some absorption through the skin. Absorption may be more rapid in the case of abraded skin, and Benzene may be more readily absorbed if it is present in a mixture or as a contaminant in solvents that are readily absorbed.
    - The defecting action of Benzene may product primary irritation due to repeated or prolonged contact with the skin.
    - A high concentration is irritating to the eyes and the mucous membranes of the nose and respiratory tract.
- Direct skin contact with Benzene may cause erythema. Repeated or prolonged contact may result in drying, scaling dermatitis, or development of secondary skin infections. In addition, there is Benzene absorption through the skin. Local effects of Benzene vapor or liquid on the eye are slight. Only at very high concentrations is there any smarting sensation in the eye.

- Inhalation of high concentrations of Benzene may have an initial stimulatory effect on the central nervous system characterized by exhilaration, nervous excitation and / or giddiness, followed by a period of depression, drowsiness or fatigue.

- A sensation of tightness in the chest accompanied by breathlessness may occur and ultimately the victim may lose consciousness. Tremors, convulsions and death may follow from respiratory paralysis or circulatory collapse in a few minutes to a few hours following severe exposures.

- Early signs and symptoms of Benzene morbidity are varied, often not readily noticed and non-specific. Subjective complaints of headache, dizziness and loss of appetite may precede or follow clinic signs.
- Rapid pulse and low blood pressure, in addition to a physical appearance of anemia, may accompany a subjective complaint of shortness of breath and excessive tiredness. Bleeding from the nose, gums or mucus membranes and the development of small bruises may occur as the condition of progress.

Regulatory Limits

- The permissible exposure limits for Benzene are as follows:
  - Airborne: the maximum time weighted average (TWA) exposure limit is 1 part of Benzene vapor per million parts of air (1ppm) for an 8-hour workday and the maximum short-term exposure limit (STEL) is 5ppm for any 15-minute period.
  - Dermal: eye and skin contact should be prevented.

Emergency Procedures

- In a medical emergency call 911, have MSDS available
- Inhalation: if inhaled, move to fresh air. If not breathing give artificial respiration.
- Skin Contact: In case of skin contact, flush with large amounts of water for at least 15 minutes.
- Eye Contact: If in contact with eyes, flush with large amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers.
- Ingestion: if swallowed, wash out mouth with water.

Training

All employees who will be involved in activities involving contact with Benzene will be required to attend a Benzene Awareness training including annual refresher training.

Heavy Mobile Equipment	**Chapter:**	35
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	Page:	1 of 5
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Purpose

To establish a program for operational guidelines and training for heavy mobile equipment as defined by OSHA, MSHA and other regulatory standards.

Scope

This program applies to all company heavy mobile equipment and operators.

Definitions

- *Attachments* – a device that can be attached to a machine to be used for a specific purpose
- *Backhoe* – a hydraulic excavating machine consisting of a tractor having an attached hinged boom, with a bucket with movable jaws on the end of the boom.
- *Bulldozers* – a large, powerful tractor having a vertical blade at the front end for moving earth, tree stumps, rocks, etc.
- *Designated* – A person selected or assigned by the employer or the employer's representative as being qualified to perform specific duties
- *Excavator* - a power-driven track driven or rubber tire mounted machine for digging, moving, or transporting loose gravel, sand, or soil.
- *Grader*– a machine for leveling earth
- *Qualified Person* – A person who by reason of knowledge, experience or training is familiar with the operation to be performed and the hazards involved
- *Soil Compactor* – machines designed to compress soil to a desired density through the application of either static force (weight) or vibratory force (vibration).
- *Skid steer* - is a compact, low-capacity machine used for pushing or lifting material and for digging is a small rigid frame, engine-powered machine with lift arms
- *Trencher* - a power excavating machine designed to remove earth in a continuous line and to a predetermined width and depth.

Procedure

- General Operation Guidelines
    - Only qualified personnel designated by the company can operate heavy mobile equipment

- Safety must always be the operator's most important concern. The operator must refuse to operate when he knows it's unsafe and consult the supervisor when safety is in doubt.
- Heavy mobile equipment must be inspected at the beginning of each shift prior to its use. The supervisor must act on deficiencies noted to ensure repairs are made.
    - All heavy mobile equipment must have the completed equipment checklist when operating
    - Equipment inspections will be submitted to the safety department weekly
- Seat belts must be worn and properly adjusted at all times while operating heavy mobile equipment
- Only the operator may be permitted to ride equipment
- The operator must completely walk around the equipment and clear the area of personnel and obstructions before operating heavy mobile equipment
- Equipment must not be started unless gears are in neutral or park and the clutch disengaged (if equipped)
- Mount and dismount equipment correctly. Do not jump off equipment. Face equipment when mounting or dismounting. Maintain three points of contact at all times.
    - Before an operator dismounts from equipment, the brakes must be set, gears placed in position to prevent equipment movement, all attachments lowered to the ground and engine shut off.
- All equipment left unattended at night , adjacent to public roadways in normal use, or adjacent to construction areas where work is in progress, must have appropriate lights or reflectors or barricades equipped with appropriate lights or reflectors to identify the location of the equipment
- When parked on a grade, the wheels or tracks of equipment must be either chocked or turned into a bank.
- Operation near drop-offs:
    - Equipment being operated along the edge of pits, materials piles or draw holes must be operated perpendicular to the drop-off at a safe distance determined by the nature of the material involved.
    - Equipment being operated on an engineered surface may be operated parallel to the drop-off.
- Equipment traveling on bi-directional roads, carrying loads that project beyond its sides or 4 feet beyond the rear must have warning flags at the ends of the projection. Under conditions of limited visibility these loads must have a warning light at the end of the projection. Flags or lights must be attached to the end of the projection or be carried by persons walking beside or behind the projection.

- The maximum speed of travel will depend on the load being carried, current road, and weather and traffic conditions.
    - Limit speed to maintain complete control over the machine
    - Equipment operators must not exceed the posted speed limit
- Equipment must come to a complete stop at blind corners and before entering doorways. The horn must be sounded before proceeding
- Headlights must be turned on at all times when operated at night, inclement weather or inside any buildings.
- Operators must keep eyes forward and the load should not block view of path. If the load is blocking the operators view, equipment should be backed up with the load.
- No person will work or pass under elevated forks, loads, blades or buckets unless properly blocked.
- Buckets, forks or attachments must be kept as low as possible when traveling.
- No modifications may be made to equipment that affects the safe operations of the piece of equipment without manufacturer's or distributors written approval.
- Mobile equipment, including attachments, may not be operated beyond its designed limits
    - Equipment and attachments must be operated according to the manufacturer's operating manual
    - Decals or placards must be placed within the operator's view, stating load capacities
- Operators must be provided with the weight of the load before lifting
- Standard hand signal charts must be posted on machines used for lifting
- The operator must not leave his position at the controls while a load is raised
- Raised loads must be kept clear of all obstructions
- Employees must not ride equipment sleds or loads being moved which are being pushed or pulled
- Buckets must not be used for hoisting personnel or as a work platform
- Operators cab must be clean and free of loose items such as tools, spare parts, or personal items that may damage or jam control levers.
    - Cab floor, all windows, controls, steps & handrails should be maintained free of dirt, grease, or oils.
- Ensure all safety guards are in their proper position and all safety warning graphics and decals are in place and readable.
- At no time will an operator ride in the cab of a transported piece of equipment
- The engine must be shut off and parking brake set during refueling. Smoking is not allowed in the refueling area.

Heavy Equipment Operations around Power Sources

- Operators must be alert for buried electrical lines and electrical line indicators in the form of flags or other markings when performing any type of excavation.
- When equipment is operated under, over, by or near power lines they must maintain a minimum clearance of ten (10) feet from any part of the machine except where the power lines have been de-energized and visibly grounded at the point of work.
- Spotters will monitor approach distances and provide timely warning to the operator if the distance is compromised.
- If equipment should come in contact with the energized wires, the following must be done:
    - The operator must stay on the machine until contact is cleared or the current is shut off.
    - Keep everyone on the ground away from the machine and keep any personnel from coming in contact with any part of the load.
    - If it is absolutely necessary to leave the machine, the operator should jump away from, not step off machine.
- Equipment Specific
    - All heavy mobile equipment must be provided with:
        - Operators and attachment manuals on the equipment or near its normal place of work for reference.
        - Equipment used for lifting must have posted on the machine:
            - A standard hand signal chart
            - Maximum load capacities; and
            - All safety decals or placards as required by the manufacturer
        - At least a five (5) pound ABC fire extinguisher mounted in the operator's cab
        - Seat belt
        - If equipped on the machine, lights must be maintained in operating condition
        - Slow moving vehicle sign (triangle) if it crosses a public highway
        - Primary walking surfaces of the skid resistant type.
        - Back-up / travel alarm if rear vision is impaired.
            - Exception: dozers not originally equipped and have a clear unobstructed view to the rear
        - Manually operated horns or other audible warning safety devices which must be maintained in functional condition.
        - Roll overprotective structures, with permanently affixed identification:
            - Manufacturers or fabricator's name and address
            - Model number (if any)
            - Machine make, model or serial number the structure is designed to fit

        - Windows of safety glass or material with equivalent safety characteristics and maintained to provide visibility for safe operation if equipped

Training

- Only trained and qualified employee are permitted to operate Heavy Equipment
  - Before being authorized to operate equipment the operator must:
    - Be instructed by a qualified person in the intended purpose and function of the equipment.
    - Read and understand the manufacturer's operating instructions and user's safety rules or been trained by a qualified person on the contents of the manufacturer's operating instructions and users safety rules.
    - Understand by reading or having a qualified person explain all decals, warnings and instructions displayed on the Heavy Mobile Equipment.
  - Operators assigned to tasks involving operation of Heavy Mobile equipment will be evaluated by a qualified person to verify operating skills to satisfy equipment specific training.
- <u>New hire equipment operators will be evaluated on specific equipment prior to operating.</u>
  - <u>After onboarding, the safety department will notify the person in charge on the assigned site to complete the documented evaluation.</u>

Program Review / Inspections

- Daily: A daily, prior-to-use inspection will be completed by each operator on all equipment before each use.
  - The supervisor must act on any deficiencies noted to ensure repairs are made.
- Frequent Inspection: The frequent inspection must be made by a qualified person on the specific make and model of equipment. Inspection frequency must be performed during routine PM or at not more than 250-hour intervals.

Process Safety Management – Contractor Responsibilities	**Chapter:**	36
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	Page:	1 of 3
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Purpose

To prevent of minimize consequences of catastrophic release of toxic, reactive, flammable or explosive chemicals in various industries. The requirements of a Process Safety Management Program are outline in 29 CFR 1910.119. Company employees will perform work at job sites that are covered by this standard, therefore, the purpose of this written program is to ensure our employees are trained in the practices necessary to conduct their work at PSM covered work sites and to ensure they abide by the safe work practices of the employers that hire us to perform various jobs.

Scope

This program applies to all company employees who are involved in the installation or maintenance of equipment and systems at a facility that has one of the following:

- A process which involves a chemical at or above the specified threshold quantities for the chemical

- A process which involves a flammable liquid or gas (as defined in 1910.1200) on site in one location, in a quantity of 10,000 pounds or more except for:

    - hydrocarbon fuels used solely for workplace consumption as a fuel (e.g. propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by this standard.
    - Flammable liquids stored in atmospheric tanks or transferred which are kept below their normal boiling point without benefit of chilling or refrigeration.

Procedure

As contractors covered under the PSM Program, we will be provided necessary information concerning the hazardous process, equipment and procedures of the particular job site our employees are working at.

- Specific Requirements
    - Prior to allowing Company employees to commence work in a process covered under PSM, the following requirements must be completed by the PSM company we will be doing work for:
        - Obtain and evaluate information regarding Company safety performance and programs (written documentation required)

- Inform site foremen or other designated employee of the known potential fire, explosion or toxic release hazards related to the work area and processes of the Company.
- Explain the applicable provision of the emergency action plan to employees
- Provide the site foremen with copies of local safety programs, safety and emergency procedures and a copy of the PSM program
- Complete all the requirements of the Company's Contractor Liability Agreement
- Inform the Company that a periodic performance evaluation will be conducted to ensure our employees are fulfilling our obligations
- Inform the Company that a contract employee injury and illness log related to our work in process areas must be maintained on site for the duration of the contract work

The Company will provide information to the Contract Employer relating to any unique hazards presented by our employee's work or any hazards found by our employees.

Training

Prior to the start of any work at a facility covered under the PSM standard, the Company will assure that each employee is trained in the work practices necessary to safely perform his or her job. The Company will provide the following documentation to each PSM covered facility that we will be performing work at:

- Our safety program information and other documentation required by the Company's Contractors Liability and Safety Agreement
- Certification that we have informed our employees of potential fire, explosion or toxic release hazards that may exist at or near their work area at the facility, and that we have explained the Company's Emergency Action Plan to our employees
    - Safety Data Sheets will be used to discuss process safety information for the particular site we will be working at.
- Training documentation concerning training provided to our employees to ensure they understand the safe work practices necessary to safely perform tasks
- Certification that we have explained Hot Work Permit Program of the Company we are working for and other permits that Company uses that will be needed during their time on company property
- Agreement to advise that Company we are working for of any unique hazards presented by our work and found during our work

- Certification that materials, parts and equipment to be installed meet industry and engineering standards for the application used.
    - The Company will assure that our employees have been instructed in known potential fire, explosion or toxic release hazards related to his/her job. The site foreman will be responsible for ensuring that each employee has received and understood the required training.
- Training will be documented and consist of the employee's name, the date of training, and the means used to verify that the employee understood the training

Safe Work Practices

Company employees will be required to abide by PSM employer's safety work practices during operations such as lockout/tag out, confined space entry, opening process equipment or piping, and controls over entrance to the facility. Safe work practices will be covered during site-specific training courses. Training will be documented.

Hot Work

Before cutting or welding is permitted at a work site, the area must be inspected by the individual responsible for authorizing cutting and welding operations at the Company we are performing work for. Company employees will not be allowed to perform hot work until a hot work permit is obtained from the employer's designated representative. The permit must be documented that provision of CFR 1910.252(a) have been met.

Incident Investigation

Employees must immediately report all accidents, injuries and near miss to their site foreman, who will then notify the correct Company individuals. An incident investigation must be initiated within 48 hours.

- Resolutions and corrective actions must be documented and maintained for five years.

Trade Secrets

Company employees must respect the confidentiality of trade secret information when any Process Safety information is released to them

Abrasive / Hydro Blasting & Pressure Washing	**Chapter:**	37
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 2
	Approved:	Safety Department

Purpose

The purpose of this program is to provide safe guidelines for the operation and maintenance of abrasive, hydro blasting and pressure washing.

Scope

This program applies to all company employees involved in abrasive, hydro blasting and pressure washing job performed by the company.

Definitions

- ***Abrasive Blasting*** *– the use of solid material carried in air under pressure to clean equipment or facilities*
- ***Hydro Blasting*** *– the use of high-pressure water sprayed from a nozzle to clean equipment or facilities. High pressure hydro work by definition will be less than 3,600 psig provided that the flow is less than 3.5 gpm or 1,000 psig if the flow is greater than 3.5 gpm or if pump capacity exceeds 13 HP at a pressure greater than 350 psig*

Specific Requirements

The following are required elements for performing Abrasive/Hydro Blasting activities:

- PTW may be required for both indoor and outdoor blasting activities
- An immediate cut-off switch (“Dead Man Switch”) will be required on blasting nozzles
- Hoses will be leak free
- OSHA/ANSI Manufacture Standards will be met on blasting pressure pots, and will be inspected by a competent person before work commences
- Nozzle must be externally attached to the hose by a fitting that will prevent accidental disengagement
- A support must be provided on which nozzle may be mounted when it is not in use
- Blast hose must be static-dissipating type
- Grounding of all blasting components including object being blasted is required
- An automatic relief device will be installed on the high-pressure side of the pump set to relieve at not higher than maximum allowable working pressure of the lowest rated component in the high-pressure system and tested.
- Prior to starting work, visual inspection of the high-pressure components including rupture disk pressure rating. Hose with exposed or damaged wire braid will be removed from high pressure service.

- The assembled high pressure water cleaning components will be slowly pressurized to the maximum operating pressure to verify integrity of the system
- Hose failures usually occur near fittings due to bending stresses during use and handling. Pressurized hoses will not be handled within one foot of hose-to-hose connections. A shroud to protect the operator must shield hose-to-tool connections, which must be frequently in contact with the operator. These shrouds will have sufficient rigidity to resist bending to radius smaller than those recommended by the hose manufacturer.
- Equipment operator nearest the high-pressure nozzle must always have a means of immediately reducing pressure and interrupting flow to the nozzle.
- A least one control valve or switch will control each high-pressure tool

Training

All employees who will be involved in activities involving abrasive/hydro blasting will be required to completed project specific operational training including annual refresher training, prior to start of project.

Purpose

To compliment the company's Fall Protection program by setting proper procedures that all employees must follow when working with ladders and stairs in order to prevent accidents from occurring in the worksite.

Scope

This program is designed to protect employees from hazards associated with the installation, care and use of portable ladders, fixed ladders, and stairs in order to ensure safety under normal conditions of use.

Definitions

- **Cleat** – a ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder
- **Fixed Ladder** – A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.
- **Handrail** – a rail used to provide employees with a handhold for support
- **Job-made ladder** – a ladder that is fabricated by employees, typically at the construction site, and is not commercially manufactured.
- **Maximum intended load** – the total load of employee, equipment, tools, materials, transmitted loads and other loads anticipated to be applied to a ladder component at any one time.
- **Point of access** – all areas used by employees for work related passage from one area or level to another. Such open areas include doorways, passageways, stairway openings, studded walls, and various other permanent or temporary openings used for such travel.
- **Portable Ladder** – a ladder that can be readily moved or carried
- **Riser Height** – the vertical distance from the top of a tread to the top of the next higher tread or platform/landing.

- **Extension Ladder** – a ladder having two or more sections joined by a sliding mechanism that allows the ladder to be extended to the total length.
- **Tread Depth** – the horizontal distance from front to back of a tread
- **Side-Step Fixed Ladder** – A fixed ladder that requires a person to get off at the top to step to the side of the ladder side rails to reach the landing.
- **Single-cleat Ladder** – A ladder consisting of a pair of side rails connected together by cleats, rungs or steps.
- **Stair Rail System** – A vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels.
- **Temporary Service Stairway** – A stairway where permanent treads and/or landings are to be filled in at a later date.

Responsibilities

- **Safety Professionals**
  - Develop and coordinate the implementation of the overall Ladder Safety Program.
  - Provide training and written instructions for the installment, care and use of ladders and stairs.
  - Shall deliver required ladder safety training to include contents of this procedure.
  - Conduct periodic inspections and evaluations to determine the continued effectiveness of the program.
  - The safety department will review the Ladder Safety Program Annually at a minimum to ensure that the procedure is current, practical and compliant with all applicable regulatory requirements.
- **Superintendents**
  - Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

- Participate in one Construction Safety Audit per month with a Safety Professional. While on site, provide employees feedback concerning ladder use.

- **Foremen**

  - Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

  - Participate in one Construction Safety Audit per month with a Safety Professional. While on site, provide employees feedback concerning ladder use.

- **Employees**

  - Shall be accountable for their own safety performance and therefore shall comply with this procedure.

  - Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

  - Thoroughly inspect and maintain ladders before and after use.

  - Report any hazards observed, which could compromise personal safety or the safety of others to his or her supervisor immediately.

Detailed Procedure

Portable Ladders

Portable ladders are designed to support one person along with all necessary equipment (tools, materials, etc.). Ladders are constructed under three general classes:

- Type I – Industrial: heavy-duty with a load capacity < 250#.
- Type IA – Extra-heavy industrial ladder with a load capacity of 300#.
- Type II – Commercial: medium-duty with load capacity < 225#.
- Type II – Household: light-duty with a load capacity of 200#.

General Rules

- The ladder chosen must be long enough to provide access to the work area without having the employees stand on the top 2 steps of the ladder or the top 3 rungs of a straight ladder.
- When a straight ladder is used to gain access to a roof, the side rails should extend at least 3 feet above the support point at the eave, gutter or roof line.
- Never connect short ladders to form a longer ladder
- Always use ladders on level, stable surfaces
- Do not use ladders on slippery surfaces
- Use ladders only for their intended purpose
- When working with electrical equipment, use only fiberglass or wooden ladders, never metal
- Use the one-to-four (1:4) ratio when using a ladder. To do this, place the ladder so its base is one foot away from what it leans against for every four feet in height to the point where the ladder rests.
- Where possible, straight ladders should be secured with a rope or wire at the top and blocked at the bottom.
- Do not over-reach, jump or slide a ladder while on it. As a general rule, keep your belt buckle between the rails at all times when on a ladder. Never put one foot on the ladder and the other on an adjacent surface. Ladders shall not be moved, shifted or extended while occupied.
- Always face the ladder and keep three points of contact on the ladder.
- Do not carry heavy loads up or down ladders. Tools or materials
- Barricades and warning signs should be posted when ladders are placed near points of access or other locations where they could be struck
- Ladders should not be posted directly in the path of access points (doorways, exits, etc.)

- Ladders should not be used by more than one person at a time unless they are designed for such use
- Do not use the bracing on the back side rails for climbing
- All safety and capacity labels must be present and legible
- Extension ladders must have proper overlap
- 3’ overlap for 32’ ladder
- 4’ overlap for 32 – 36’ ladder
- 5’ overlap for 36 – 38’ ladder
- 6’ overlap for 48’ ladder
- Both automatic locks of the extension ladder are to be in proper position before ascending the ladder
- The area around the top and bottom of the ladder must be kept clear at all times.

Inspection

- Prior to use of any ladder, an inspection must be performed.
- Never use a defective ladder. If the ladder is found to be defective, it must be destroyed before it is discarded.
- Always refer to the manufacturer’s specifications for further details on inspecting and maintaining ladders.
- Ladders must be inspected monthly. The following items should always be observed during visual inspections:
- Carefully examine the ladder for broken or missing rungs or cleats, broken side rails, and other damaged parts.
- All cleats, rungs and side rails must be free of grease, oil, paint or other slipper substances.
- The ladder should be equipped with feet that are secured in place.

- The joint between steps and side rails must be tight, and all hardware and fittings should be attached firmly. Moveable parts should operate freely without binding.

- All wood parts must be free of sharp edges
- Visually inspect the ladder to be free of warp age, decay or other irregularities.
- Metal ladders must be free of sharp edges, burrs and corrosion.
- Inspect for dents or bends in side rails, rungs or cleats.
- Check step to side rail connections, hardware connections and rivets.
- If a ladder tips over, inspect the ladder for damage before continuing work.

Ladders that pass inspection must be tagged based on the following color code system:

Month	Color Code Scheme	Month	Color Code Scheme
January	**ORANGE**	**July**	**RED**
February	**BLUE**	**August**	**YELLOW**
March	**RED**	**September**	**ORANGE**
April	**YELLOW**	**October**	**BLUE**
May	**ORANGE**	**November**	**RED**
June	**BLUE**	**December**	**YELLOW**

Maintenance

Damaged ladders must be tagged or marked, withdrawn from service, and destroyed. Notify supervisor immediately.

Field repairs and the fabrication of improvised ladders are not permitted.

Never use or try to straighten a bent or bowed ladder. Remove it from service immediately.

If exposed to greases, oils or other slippery substances, the ladder must be cleaned. If the substance cannot be completely removed, the ladder must be removed from service.

Storage

Ladders must be stored in areas free of unknown hazards, where they can be inspected easily and can be reached without causing accidents.

Fixed Ladders

All fixed ladders should be designed to withstand a single concentrate load of at least 200 lbs. If necessary, they should be painted or treated to prevent rust and deterioration depending on their location. The following rules apply to fixed ladders:

Rungs of metal ladders must have minimal diameters of three quarter inch. Rungs must be at least 16 inches wide, be spaced 12 inches apart.

The preferred pitch for a safe descent is 75 to 90 degrees. Ladders with a 90 degree pitch must have 2 ½ feet of clearance on the climbing side. There must be a 3 ft clearance on ladders with a 75 degree pitch.

There must be at least a 7 inch clearance in back of the ladder to provide adequate toe space.

There must be a clear width of 15 inches on each side of the center line of the ladder, unless the ladder is equipped with a cage or well.

Fixed ladders must have cages if they are longer than 20 feet. Landing platforms must be provided on ladders greater than 20 feet long. A platform is required every 30 feet for caged ladders and every 20 feet for unprotected ladders.

Side rails must extend at least 42 inches above the landing.

Training

Employees must be trained on all of the rules and regulations pertaining to ladder and stair safety, including the proper installment, care, use and handling and storage.

Additional training must be conducted in response to the following circumstances:

- Whenever changes in the workplace or this procedure render previous training obsolete
- When inadequacies in the employee's use and handling indicate that the employee has not retained the requisite understanding or skill; and

When any other situations arise in which retraining appears necessary to ensure the proper installment, care, use, handling and storage.

Severe Weather Guidelines	**Chapter:**	39
	Issued:	3/27/2015
	Revised:	04.19.2022
	Page:	1 of 6
	Approved:	Safety Department

Purpose

Construction jobsites are vulnerable to severe weather including thunderstorms, tornadoes, high winds, heavy or frequent rain, and lightning. By nature, some jobsites offer little or no storm refuge areas. This lack of refuge increases the importance of severe weather planning. Jobsite severe weather planning is created to protect employees when severe weather is eminent.

Scope

Each situation will warrant action(s) to prevent injury and damage. This will need to be determined on a case-by-case basis. However, there are certain events (i.e. high winds, heavy rain, tornados and lightning) that an established protocol of action will be enacted.)

At no time should an employee or any other person on a jobsite be required to perform work activities in weather conditions that could cause injury to themselves, other, property or surrounding community.

Mitigation of work stoppage for adverse weather conditions may include temporary sheltering in work areas, redirecting work activities and/or relocating of personnel.

Definitions

- ***Tornado*** - A violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud roaring noise. On a local scale, it is the most destructive of all atmospheric phenomena.

- ***Lightning*** - A visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds, between the cloud and air, between a cloud and the ground or between the ground and a cloud.

- ***High Winds*** - Sustained surface winds, or frequent gusts, in the range of 48 knots (55 mph) either predicted or occurring, and not directly associated with a tropical cyclone.

- ***Severe Local Storm*** - A convective storm that usually covers a relatively small geographic area, or moves in a narrow path, and is sufficiently intense to threaten life and/or property. Examples include severe thunderstorms with large hail, damaging wind, or tornadoes. Although cloud-to-ground lightning is not a criterion for severe local storms, it is acknowledged to be highly dangerous and a leading cause of deaths, injuries, and damage from thunderstorms. A thunderstorm need not be severe to generate frequent cloud-to-ground lightning. Additionally, excessive localized convective rains are not classified as severe storms but often are the product of severe local storms. Such rainfall may result in related phenomena (flash floods) that threaten life and property.

- ***30/30 Rule*** - Once lightning is seen and thunder is heard within 30 seconds of one another. Test used as an indicator to seek shelter.

- ***Severe Weather Statement*** - A National Weather Service product which provides follow up information on severe weather conditions (severe thunderstorm or tornadoes) which have occurred or are currently occurring

- ***Flooding*** - Terms defined for each forecast point which describe or categorize the severity of flood impacts in the corresponding river/stream reach. Each flood category is bounded by an upper and lower stage. The severity of flooding at a given stage is not necessarily the same at all locations along a river reach due to varying channel/bank characteristics or presence of levees on portions of the reach. Therefore, the upper and lower stages for a given flood category are usually associated with water levels corresponding to the most significant flood impacts somewhere in the reach. The flood categories used in the NWS are:

    - Minor Flooding - minimal or no property damage, but possibly some public threat.

    - Moderate Flooding - some inundation of structures and roads near stream. Some evacuations of people and/or transfer of property to higher elevations.

    - Major Flooding - extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.

    - Record Flooding - flooding which equals or exceeds the highest stage or discharge at a given site during the period of record keeping. Note: all three of the lower

flood categories (minor, moderate, major) do not necessarily exist for a given forecast point. For example, at the level where a river reaches flood stage, it may be considered moderate flooding. However, at least one of these three flood categories must start at flood stage.

Responsibilities

- **Safety Professionals**

  - Shall be responsible for designing safe evacuation procedures.

  - Shall designate offsite meeting areas to make it easier to ascertain who is safe and who is missing. This is particularly important in larger buildings and for businesses operating potentially dangerous machinery or handling hazardous materials.

  - Shall make time for field inspections per the current Leadership Inspection procedure. While on site, provide feedback to employees concerning weather preparedness procedures.

- **Superintendents**

  - Are responsible for tracking weather events and/or impending atmospheric conditions that could threaten the project site work.

  - Shall determine adverse weather related work suspensions. Work may not proceed until safe working conditions have been determined by site superintendent.

- **Foremen**

  - Shall be responsible for tracking weather events and/or impending atmospheric conditions that could threaten the project site work.

  - Are accountable for project safety performance and employee compliance with this procedure. And, therefore, shall hold foremen and employees accountable for complying with this procedure.

  - Shall make time for field inspections per the current Construction Safety Audit procedure. While on site, provide feedback to employees concerning weather preparedness guidelines.

- **Employees**
    - Shall be accountable for their safety performance and therefore shall comply with this procedure.
    - Shall also provide peer-coaching to others when compliance gaps to this procedure are observed in co-workers behavior.

Detailed Procedure

- ***High Winds*** – Prior to the onset of high winds, precautions should be taken to secure loose material, rescheduling of elevated work tasks, lowering of crane booms and other precautions necessary to prevent injury to personnel or property damage. Regular housekeeping will mitigate clean up prior to an emergency.

- ***Heavy or Frequent Rain*** – precautions will be made for collection and runoff of rainwater. Dewatering pumps may be needed to remove standing water that is unable to be managed through engineering controls. Trenches and other excavations may need to have pumps dedicated to their specific locations and utilized for water removal from rain and ground water infiltration.

- All project site water collection, infiltration and runoff may need to be pumped to a holding pond of an adequate size.

- ***Lightning*** – The following will be used as a guideline for taking necessary precautions and action to protect personnel and property.
    - The 30-30 rule will be used to initiate the early state of precaution.
    - If the storm is within the 30 second windows indicated by the 30 – 30 rule, shelter will be sought immediately inside a well constructed building.
    - Employees will be reminded to avoid plumbing and electrical equipment or other conductive material while within the shelter.

- When possible, cranes and other equipment that are likely lightning targets will be lowered to the ground. Otherwise, shelter away from the crane at a predetermined location.

- All employees will be advised when it is safe to return to work. This is typically greater than 30 minutes after the storm has passed.

- ***Tornado****s* – In the event that tornado warnings have been issued for the jobsite location, all personnel will be required to shelter in place or at pre-designated locations.

Training

- All personnel shall receive initial training on this procedure.
- All emergency evacuation training will be conducted on a job specific basis at mobilization and at the weekly tailgate.
- Emergency preparedness shall be discussed with each JHA.
- Refresher training on this procedure shall occur annually or when performance dictates more frequent training is needed.
- All training shall be delivered by safety professionals to Leadership. Same training shall be delivered by the Leaders to their respective crews.

Warning Signs & Barricade Tape	**Chapter:**	40
	Issued:	3/27/2015
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	Pages:	1 of 4
	Approved:	Safety Department

Purpose

Our policy is to protect personnel from injury by providing barricade warning of potential safety hazards

Scope

This Policy applies to all Comapnay employees, visitors, and contract personnel who discover, create, or work on or in any area which may be a safety hazard to other personnel.

Definitions

- **Barricade Tape** - Appropriate colored tape used to mark the perimeter boundary of an area containing a safety hazard.

- **Safety Hazard** - Any object or condition which may cause personal injury or equipment damage.

- **Yellow Safety Chain** – Plastic chain used to mark the perimeter boundary of an area containing a safety hazard.

- **Barricade Tape Tags**

    - Danger Tape Tag (red) - A barricade tag must be completed and hung off all danger barricade tape being used. The tag should be placed at a location where persons other than the work crew inside the barricaded area will most likely see it. More than one tag may be necessary. The tag must be completely filled out with the name of the person in charge of the work activities working inside the barricade area. Also, the name of each member of the work crew must be listed on the backside of the barricade tag. Any authorized person, whose name is listed on the tag, may authorize other person's access inside the barricade area.

    - Caution Tape Tag (yellow) - A barricade tag must be completed and hung off all caution barricade tape being used by. The tag should be placed at a location where persons other than the work crew inside the barricaded area will most likely see it. More than one tag may be necessary. The tag must be completely filled out with the name of the person putting up the barricade tape.

Responsibilities

- Supervision
  - Ensure that barricade tape is used accordingly to this policy.
  - Ensure that barricade tape is readily available.
  - Train employees on proper use of barricade tape.
  - Ensure that safety chains are properly used.
  - Ensure that barricade tape tags are legible.

- Employees
  - Ensure that barricade tape is used accordingly to this policy.
  - Use barricade tape when a potential hazard exists that may cause harm or injury if left unattended.
  - Tag the barricade tape with the appropriate tag.
  - Remove barricade tape and tag after the hazard is resolved.
  - Secure safety chains where used and ensure proper signage.

Detailed Procedure

The company will have warning signs and barricades in place throughout jobsites as required which follows:

- All signage will comply with ANSI color code and OSHA compliant verbiage

- All signage will be in English and Spanish (where required).

- All crane lifting operations will use barricade tape and warning signs of "Overhead work in progress" and have controlled access zones set up.

- Confined Space – Entry by Authorize Personnel Only and No Entry – when personnel are not inside Confined Space.

  - All work activity where the potential for tools or material to fall below will have the lower level barricaded and set up as a control access zone.

- Yellow (Caution) tape will be utilized to warn employees of potential hazards. Employees should not enter areas marked with yellow tape unless their job requires them to be in the area and they are aware of the potential hazards. All barricaded areas will require 360 degrees of coverage – meaning that the risk or danger must be clearly defined using the woven barricade tape. The tape must be up and maintained at all times.

- Red (Danger Do Not Enter) tape will be utilized to mark areas of imminent danger and only employees assigned to correct the problem should enter. Employees assigned to correct the problem in this area should be told about the hazard and what protective measures to follow.

- Tags must be attached to the barricade tape or chain any time tape or chain is in place. Tags identify the caution or hazard; the person to contact regarding the barricading, including phone numbers, date and erection and duration. Unauthorized entry may lead to disciplinary action, up to and including termination. All Barricade tape should be removed when the hazard is corrected. Tags are to be placed at each approach point and at intervals not greater than 50 feet. If possible, detour signs will be posted before personnel get to the barricade. The tags will be checked each day for legibility to retain area control. Should questions arise as to how an area should be barricaded, contact the Safety Professional.

- Barricade Tape is not to be used to guard open-sided floors, holes and excavations, or platforms and runways 4ft. or more above the adjacent floor. Temporary railing must be

provided (top-rail and mid-rail) for these situations and then marked with Barricade tape. Openings smaller than 4 ft. that may cause personal injury must be covered immediately. Yellow Safety Chain will be utilized in areas where a more permanent barrier is needed due to the frequency of usage. Permanent signage should be affixed to the chain on all approach points and intervals not greater than 50 ft.

- When overhead work is performed or work causing falling debris, the area below will be marked with red barricade tape. (All individuals working with suspended loads or have the potential for injury to the head from falling objects must wear a hard hat.)

- When radiation devices are removed from their source holder or damaged, radiation barricade tape will be used to rope off a safe work distance. (No one will be allowed to enter the roped off area, unless they have been trained in radiation safety.)

- Storage of naturally occurring radioactive material above the natural background level will be marked with radioactive barricade tape.

- In the event of a Hazmat emergency, barricade tape specifically designed for Hazmat operations will be used. Only trained individuals will be allowed in the warm and hot zones.

Training

Training will be completed annually. Each employee is responsible to attend his or her scheduled session.

Purpose

The purpose of reporting is to ensure all stakeholders are informed and can take appropriate action to ensure proper care for any injury and compliance. The purpose of an investigation is to establish relevant facts as to how and why the incident occurred so that appropriate corrective action can be taken to prevent a recurrence. The purpose of analysis is the ensure root cause of an incident is understood and effective countermeasures are implemented.

Scope

This procedure is applicable to those within Construction businesses (General Contractor, Industrial, and Engineering). This chapter shall be used to investigate any incident resulting in any injury. At the Vice-Presidents discretion, this chapter may be used to investigate near misses, theft, motor vehicle accidents or any of the above involving subcontractors.

Definitions

Competent Person – One who is able to recognize hazardous conditions or situations and has the authority to take corrective measures.

Incident – Any safety or security related occurrence that should not be repeated. Examples include near misses, theft, or motor vehicle accidents.

Responsibilities

- Safety Professionals
    - Partner with Operations leadership to ensure incident reporting, investigation and analysis is completed as specified in the Chapter.
    - Partner with Operations leadership to jointly lead the incident investigation and analysis.
    - Ensure root causes are identified and countermeasures are scheduled for implementation.
    - Help the analysis team identify countermeasure replication and standardization opportunities.

- Develop and maintain investigation and analysis skills necessary to lead both.
- Send email notification of the incident per policy

- Supervisors / Managers
  - Participate in the incident investigation as deemed necessary. Depending on the nature of the incident and the personnel involved, a best practice is to have supervision external to the chain of command of those involved participate in the investigation.
  - For supervision in the chain of command of those involved, actively participate in the incident analysis.
  - Partner with Safety Professionals to jointly lead the incident investigation and analysis. Distribute and review the results of the investigation with employees.
  - Ensure root causes are identified and countermeasures are scheduled for implementation.
  - Help the analysis team identify countermeasure replication and standardization opportunities.
  - Once analysis has been completed, supervisors in the chain of command of those involved in the incident shall lead the executive team through a review of the analysis.
  - If necessary, determine appropriate performance management for those involved.
  - Develop and maintain investigation and analysis skills necessary to lead both.

- Employees

  Participate in the incident investigation and analysis as deemed necessary.

  Review and understand root causes to the incident and associated countermeasures.

No matter how minor, report any incident per the instructions below.

Detailed Procedure

- Accident Handling
    - If the result of the accident is a minor injury, such as a small scrape or bruise, first aid shall be administered.
    - If the result of the accident is of a more serious nature, the employee shall be taken to the nearest medical facility.
    - Should the accident involve a chemical, the Safety Data Sheet must be provided to the medical provider.
- Incident Reporting card w/ badge on what to do, include press, etc.
    - All incidents, no matter how minor, shall be reported to site leadership and a Safety Professional immediately (meaning as soon as any injured employee receives medical attention). This includes any safety and health related near miss information or injury information gained from conversations with employees. The Safety Professional is a resource to provide direction on handling all incidents and injured employees. When in doubt, call supervision or a Safety Professional.
    - The host facility/client shall be notified immediately (within 4 hours) of the incident/accident by the site foreman/superintendent.
    - A Safety Professional will notify operational management of the incident via email within 4 hours of receiving a report. Those listed in the Appendix shall be the distribution list for the incident notification.
    - The Project Manager/Supervisor Incident Investigation Report and the Employee on the Job Injury Report and revised/reviewed JHA must be completed and submitted to the Safety department within 24 hours of the incident.

- All information must be complete and accurate to include employee, site and incident details.

- For incidents that do not result in injury to a company employee but does result in injury to a trade contractor or subcontract employee, the incident must be documented with all of the above reference information and documentation. This documentation must be submitted to a Safety Professional as well as the injured person's employer.

- Incidents resulting in death or the hospitalization of three (3) or more employees will be verbally reported to the OSHA area office and other applicable regulatory agencies within eight (8) hours of the fatality or hospitalizations.

- Secure the Incident Location (complete within 24 hours of an incident)

    - Competent person shall secure the incident location and ensure all personnel and equipment are in safe locations. Under the guidance of Safety Professional, implement interim countermeasures.

    - Under the guidance of a Safety Professional, competent person shall procure the proper equipment to collect and secure any items that could be considered evidence. All evidence must be identified referencing the incident name and/or number and must be collected in a way as to preserve in original condition.

    - Under the guidance of a Safety Professional, competent person shall appropriately identify and reference evidence in safety reporting documentation.

    - Competent person shall submit all evidence to a Safety Professional for review, preservation, and security.

    - Under the guidance of a Safety Professional, competent person shall secure statements for all individuals involved in the incident.

    - Competent person shall ensure all statements are signed and dated by each person giving a statement.

- Form the Investigation and Analysis Team (complete within 48 hours of an incident)
    - Compliance Manager determines which Safety Professional will support the Investigation and Analysis Team.
    - Business Unit VP determines which exempt leader will support the Investigation and Analysis Team. A member of the Safety Team should also be considered.
    - Business Unit VP determines if other employee(s) may add value to the Investigation and Analysis Team. Craft level employees or Project Engineers may bring insight and skills to the process that others may not have. A member of the Safety Team should also be considered.
- Incident and Analysis Team Documents the Current Situation (complete within 72 hours of an incident)
    - Obtain copies of and review all statements.
    - As a Team, discuss the statements and determine what more information may be needed to complete the analysis. Develop a list of questions that may need to be asked.
- Document the sequence and timing of events prior to, during and after the incident. Include pertinent facts and barriers that should have prevented the incident.
- Incident and Analysis Team Defines a Problem Statement (complete within 72 hours of an incident)
    - The problem statement shall be similar to the following format:
    - (Time period), (Description of what happened) resulting in (description of the severity and consequences).
    - EXAMPLE: On Friday, September 4, an employee had a fall from a ladder resulting in two broken bones and three days of lost work.
- Incident and Analysis Team Performs Analysis (complete within 10 days of an incident)

  - Brainstorm potential root causes.
  - Determine which of the potential root causes likely lead to the incident.
  - Verify that the root causes did in fact lead to the incident. Are there other items that have not been evaluated that could have caused the incident?

- Incident and Analysis Team Evaluates & Selects Countermeasures (complete within 17 days of an incident)
  - Brainstorm potential countermeasures that would eliminate the root causes.
  - Select for implementation the countermeasures that are either easy to implement and / or are mostly likely to prevent recurrence of the incident.
  - Upon approval from all stakeholders (including the appropriate VP), schedule countermeasures to be implemented. Countermeasures with significant costs shall be evaluated against the expected effectiveness of eliminating the root causes prior to implementation.

- Incident and Analysis Team Plans Countermeasure Verification (complete within 24 days of an incident)
  - Develop a plan to evaluate the effectiveness of all countermeasures implemented.
  - Evaluation shall be completed as soon as possible with the understanding that some situations related to the incident may not recur frequently.

- Incident and Analysis Team Recommends Plans for Standardization (complete within 30 days of an incident)
  - Develop recommendations to institutionalize countermeasures within the construction business.
  - Develop recommendations to replicate countermeasures to other areas of the construction business.

  - Stakeholders review for replication opportunities in other HWH businesses.

- Incident & Analysis Team Makes Future Plans (complete within 30 days of an incident)
  - Develop a list of any open items related to the incident analysis.
  - Schedule a review of the event with the executive team.

Recordkeeping

  - The Company shall maintain records of employee training and accident investigation for a minimum of five years.
  - Copies of required accident investigation and certification of safety training are maintained by the Safety Department.
  - A written report is maintained on each accident, injury, or on the job illness for reporting to OSHA.
  - OSHA 300 log is updated within 7 days of receiving information that an injury occurred.
  - OSHA 300A summary is completed at the end of every year for reporting as required. This summary will be signed by a senior company official and posted between February 1st and April 30th each year.

Training

Investigation techniques. One time training or when performance dictates more often. Target population is Superintendent and above.

Quality Tools to include 7 step problem solving. One time training or when performance dictates more often. Target population is Superintendent and above.

Manual Handling	**Chapter:**	42
	Issued:	04/16/2016
	Revised:	04.19.2022
	Pages:	1 of 3
	Owner:	Safety Department

Purpose

This program is a guide for employee in safe material handling practices. All employees are responsible for following steps detailed in this procedure for any material handling activity as defined in this program.

Scope

This program applies to activity that involves lifting, pushing, pulling, carrying, moving holding, or restraining. It also includes sustained and awkward postures or repetitive movements.

Procedure

- Managing Manual Handling Risk
    - Good manual handling techniques can help to prevent injury. The key to managing risk is identifying work activities that involve manual handling and which may pose a risk to employees.
    - Risks must be evaluated and minimized. The pre-job Hazard Analysis will be used to identify activities that will involve manual handling.
    - Activities will be noted on the JHA including appropriate tools and/or actions to be taken to minimize risk of injury.
        - JHA must be reviewed with all employees working on site.
- Minimizing Manual Handling Risk
    - The Safety Department will ensure work practices are designed to minimize risk and be consistent with the safe handling of objects. Manual lifting equipment and other engineering controls will be provided to employees to minimize risk.
    - All objects, work practices and the working environment are designed, constructed, and maintained so as to eliminate risks arising from manual lifting.
        - Where it is not practical to eliminate manual handling risks, the safety department will assist in identifying controls for these risks and if necessary:

- Provide mechanical aids or as a last resort use a lifting team
- Ensure all employees are trained in manual handling techniques, correct use of aids and team lifting procedures.

- Assessing the Lift
  - All employees must consider their own capacity prior to attempting a lift. Do you have injuries? Are you recovering from an illness?

  - Before undertaking to lift an object, employees must assess the start and finish heights and ensure clear pathways
  - For lifting objects over 50lbs, employees should use mechanical aids or two or more people.
  - For large (awkward) objects, employees must use mechanical aids or two person lifting techniques.

- Performing a Lift
  - In preparation for lifting an object, warm up the muscles by stretching and then test the weight of the load.

  - Begin with a smaller load using a whole hand grip
  - For good balance, use a wide base of support and position yourself with your feet shoulder width apart
  - Use smooth motions and hold the load close to the body
  - Maintain the natural curves of the spine as you move through the lift
  - Use hip and knee joints to bend to the object rather than bending the spine in exaggerated curves. Do not twist or bend the back sideways.

- Manual Lifting Injuries
  - All injuries no matter how minor must be reported to the Safety Department immediately.

  - Following a lift or move, report any discomfort.
    - apply ice initially to the area and try to rest the area
    - apply heat, stretches and massage to the area, keeping active to hasten recovery.

- The Safety Department will investigate all manual lifting injuries as described in Chapter 41 Incident Reporting, Investigations & Analysis of this manual.

    - Findings from injury investigations will be incorporated into the safety procedures and communicated to all employees through jobsite stand-down's and safety meetings.

- Monitoring and Review

    - All employees are required to identify new manual handling hazards, report them to their supervisor. The safety department will verify solutions are appropriate and have not created new problems.
    - The Safety Department will review the register of injuries and incident reports and update work procedures regularly.
    - Safety & Health Inspector and leadership will audit compliance and effectiveness of procedures during weekly site safety inspections.

Silica Exposure Control	**Chapter:**	43
	Issued:	05.01.2018
	Revised:	04.19.2022
	Pages:	1 of 6
	Owner:	Safety Department

Purpose

The purpose of this program is to establish and implement a written exposure control plan that identifies tasks involving silica exposure and methods used to protect employees.

Scope

This program applies to all Company employees who are expected to be exposed to respirable crystalline silica as outlined in this procedure; or through other means which are determined by their supervisor or the safety department.

Procedure

For each employee working with materials containing crystalline silica and engaged in a task using the equipment and machines listed below, the Company will fully and properly implement the engineering controls, work practices and respiratory protection as specified. When respirators are required – the Company will provide equipment to exposed employees at no charge to the employee.
A copy of the written exposure control plan is available to all employees. This program will be assessed for effectiveness a minimum of annually.

Stationary Masonry Saws

- Engineering Control: Water continuously fed to the blade
- Respiratory Protection: None required

Drivable Saws

- Engineering Control: Water continuously fed to the blade
- Respiratory Protection
    - Enclosed area: cannot use saw in enclosed area
    - Outside area: None required

Handheld Power Saws

- Engineering Control: Water continuously fed to the blade
- Respiratory Protection (less than 4 hours per shift)
    - Enclosed area: N95 Dust Mask
    - Outside area: None required
- Respiratory Protection (more than 4 hours per shift)
    - Enclosed area: N95 Dust Mask

- Outside area: N95 Dust Mask

Walk-Behind Saws

- Engineering Control: Water continuously fed to the blade
- Respiratory Protection (less than 4 hours per shift)
  - Enclosed area: N95 Dust Mask
  - Outside area: None Required
- Respiratory Protection (more than 4 hours per shift)
  - Enclosed area: N95 Dust Mask
  - Outside area: None Required

Ring Mounted Core Saw or Drill

- Engineering Control: Water continuously fed to the blade
- Respiratory Protection: None Required

Handheld and Stand-Mounted Drills

- Engineering Control: Commercial shroud or cowling with dust collection system
- Respiratory Protection: None Required

Jackhammers and Handheld Power Chipping Tools

- Engineering Control: Water continuously fed to the point of impact – OR – Commercial shroud or cowling with dust collection system
- Respiratory Protection (less than 4 hours per shift)
  - Enclosed area: N95 Dust Mask
  - Outside area: None Required
- Respiratory Protection (more than 4 hours per shift)
  - Enclosed area: N95 Dust Mask
  - Outside area: N95 Dust Mask

Walk Behind Milling Machines and Floor Grinders

- Engineering Control: Water continuously fed to the point of impact – OR – Commercial shroud or cowling with dust collection system
- Respiratory Protection: None Required

Small Drivable Milling Machines (less than Half-lane)

- Engineering Control: Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant.

- Respiratory Protection: None Required

Large Drivable Milling Machines (Half-lane or Larger)

- Engineering Control: Use a machine equipped with exhaust ventilation or drum enclosure and supplemental water spray designed to suppress dust – OR – use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant.
- Respiratory Protection: None Required

Heavy Equipment (Demolition)

- Engineering Control: Operator equipment from within an enclosed cab – AND – when employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize
- Respiratory Protection: None Required

Heavy Equipment (Grading & Excavation)

- Engineering Control: Apply water and/or dust suppressants as necessary to minimize dust emissions – OR – when the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.
- Respiratory Protection: None Required

Handheld Grinders for Mortar Removal

- Engineering Control: Commercial shroud or cowling with dust collection system
- Respiratory Protection (less than 4 hours per shift)
    - Enclosed area: N95 Dust Mask
    - Outside area: N95 Dust Mask
- Respiratory Protection (more than 4 hours per shift)
    - Enclosed area: Full face air purifying respirator
    - Outside area: Fill face air purifying respirator

Handheld Grinders for Uses Other Than Mortar Removal

- Engineering Control: Water continuously fed to the grinding surface – OR – commercial shroud or cowling with dust collection system
- Respiratory Protection (less than 4 hours per shift)
    - Enclosed area: None Required
    - Outside area: None Required

- Respiratory Protection (more than 4 hours per shift)
    - Enclosed area: N95 Dust Mask
    - Outside area: None Required

Housekeeping

- The Company does not allow dry sweeping or dry brushing where such activities could contribute to employee exposure to respirable crystalline silica
    - Use wet sweeping methods
    - Use HEP- filtering vacuuming
- The Company will not allow compressed air to be used to clean clothing or surfaces where activities could contribute to employee exposure to respirable crystalline silica.

Additional Exposure Assessment

- If any employee is exposed to respirable crystalline silica and engaged in a task using equipment and machines not identified in the list about, they must contact the safety department prior to performing tasks for an exposure assessment to determine the engineering controls, work practices, and respiratory protection requirements to safely do their job.
- Assessment records will be maintained on file in the Safety Department.

Medical Surveillance

- All employees whose exposure is equal to or exceeds the action level for 30 or more days per year, will receive medical surveillance through local occupational health.
- Medical records will be maintained for a minimum of 30 years.

Safe Work Practices

The primary means of protecting employees will be through the use of less toxic materials, enclosed systems, local exhaust ventilation, wet methods, and good work practices.

Reducing exposure to crystalline silica in the workplace

- Wet down the dust at the point of generation

- Install local exhaust ventilation to prevent dust from being released into the air
- During rock drilling, flow water through the drill stem
- Install dust collection systems onto machines or equipment that generate dust
- Use concrete / masonry saws that provide water to the blade
- Silica sand or other substances containing more than 1% crystalline silica will not be used for abrasive blasting
- Good personal hygiene will be practiced avoiding unnecessary exposure. Eating, drinking, or use of tobacco products will not be done in areas where there is dust containing crystalline silica
- If possible, employees will shower and change into clean clothes before leaving the jobsite to prevent contamination of cars, homes or other work areas.

Housekeeping Program

Exposed surfaces must be maintained free of accumulation of silica dust. To minimize the hazard of accumulated dust containing silica dust, the area must be cleaned properly.

Cleaning areas contaminated with dust containing silica

- Clean floors daily with wet mop, wet pickup vacuum, or a HEPA filtered vacuum cleaner. The most effective method is with a HEP vacuum cleaner.
- Never sweep, dry mop, use compressed are or use a regular vacuum cleaner. Regular vacuum cleaners are not suitable because they filter out heavy particles, allowing the finer more hazardous particles to pass into the air.
- Clean shelves with a damp sponge or a HEPA vacuum cleaner.
- Used filters should be carefully placed in a double plastic bag and disposed in the regular trash.
- Wear the proper respirator when changing HEPA filters.

Training

Workers who may be exposed to silica will receive safety training to include the following information:

- Information about the potential health effects of exposure to respirable crystalline silica
- Safety data sheets / Safety data sheets for silica, masonry products, alternative abrasives and other hazardous materials.
- Discussion about the importance of substitution, engineering controls, work practices and personal hygiene in reducing crystalline silica exposure.

- Instruction about the use and care of appropriate personal protective equipment (including protective clothing and respiratory protection)
- Training will be conducted by the safety department. Training records will be maintained for a minimum of 3 years.

Compressed Air Safety	**Chapter:**	44
	Issued:	08.23.2019
	Revised:	04.19.2022
	Pages:	1 of 4
	Owner:	Safety Department

Purpose

The purpose of this program is to establish and implement a written Compressed air program that identifies methods for inspection and use.

Scope

This program applies to all Company employees who are expected to be exposed to compressed air.

Procedure

Compressor General Safe Operation

- Compressors can be portable and stationary; powered with electricity or gas.
- Portable compressors on wheels must be prevented from rolling.
- Warning signs are required for electric air compressors equipped with an automatic-start function.
- Before each use, inspect the compressor hoses, wires, and pipes for wear and damage. Check the air tank for pin holes, rust, or weak spots at the welds.
- Never repair, weld, or drill into tanks; damaged tanks must be replaced.
- Drain moisture from the tank after each use to prevent rust.
- Protect air lines and hoses by keeping the work area clean of sharp objects, chemicals, and grit that can cause damage.
- Start the compressor using manufacturer's instructions. The compressor switch should be off, the air tank drained, and the tank pressure reading zero before you power the compressor and turn it on. Adjust the regulator to the desired pressure, making sure it doesn't exceed the rated capacity of hoses and equipment.
- Safety valves prevent the tank from becoming over-pressurized; check them before each use by pulling the valve ring. It should go back in by itself. Replace the valve if air leaks after the ring is pulled, if the valve sticks and the ring doesn't re-set, or if air is not released when the ring is pulled. Safety valves should be set about 10% higher than the maximum operating pressure of the compressor.
- To avoid burns, keep your hands away from hot compressor parts. Wear gloves and use tools to disconnect hoses while the unit is warm.
- Use grounded compressors in a dry environment to avoid electric shock.

- Keep cooling fans and belt motor pulleys guarded to prevent caught/crush injuries.
- Keep loose hair, clothing, and jewelry away from moving parts.
- Air from the compressor is not safe for breathing through a supplied-air respirator unless it has been certified as Grade D breathing air through special filtering and purifying filters.
- Never look into a compressed air nozzle, or into a tool powered by compressed air. Compressed air nozzles can cause severe damage if the air is discharged into your body. A careless air discharge can rupture an eardrum, cause brain hemorrhage, pop an eye, rupture internal organs, and cause bubbles in the blood stream.
- Do not use compressed air for cleaning parts unless it is less than 30 psi in pressure and proper PPE is worn.
- Under NO CIRCUMSTANCE should employees use compressed air to clean themselves or clothing while they are worn.
- To shut the compressor down, turn the power switch off; do not unplug it. Close the regulator valve until the pressure gauge reads zero. Drain the air tank. Unplug the compressor if it will be unattended or if you are finished for the day. De-pressurize tank, pipes, hoses, and gauges before disconnecting them. Cool compressors before storing. compressor use and work practices.

AIR RECEIVERS:

- The maximum allowable working pressures of air receivers should never be exceeded except when being tested. Only hydrostatically tested and approved tanks shall be used as air receivers

- Air tanks and receivers should be equipped with inspection openings, and tanks over 36
    - inches in diameter should have a manhole. Pipe lug openings should be provided on tanks with volumes of less than five cubic feet.
- The intake and exhaust pipes of small tanks, similar to those used in garages, should be
    - made removable for interior inspections.
- No tank or receiver should be altered or modified by unauthorized persons.
- Air receivers should be fitted with a drain cock that is located at the bottom of the
    - receiver.
- Receivers should be drained frequently to prevent accumulation of liquid inside the unit.
- Receivers having automatic drain systems are exempt from this Requirement.
- Air tanks should be located so that the entire outside surfaces can be easily inspected.
- Air tanks should not be buried or placed where they cannot be seen for frequent inspection.

- Each air receiver shall be equipped with at least one pressure gauge and an ASME safety valve of the proper design.
- A safety (spring loaded) release valve shall be installed to prevent the receiver from exceeding the maximum allowable working pressure.
- Only qualified personnel should be permitted to repair air tanks, and all work must be done according to established safety standards.

AIR DISTRIBUTION LINES:

- Air lines should be made of high-quality materials, fitted with secure connections.
- Only standard fittings should be used on air lines.
- Operators should avoid bending or kinking air hoses.
- Air hoses should not be placed where they will create tripping hazards.
- Hoses should be checked to make sure they are properly connected to pipe outlets before use.
- Air lines should be inspected frequently for defects, and any defective equipment repaired or replaced immediately.
- Compressed air lines should be identified as to maximum working pressures (psi), by tagging or marking pipeline outlets.

PRESSURE REGULATION DEVICES:

- Only qualified personnel should be allowed to repair or adjust pressure regulating equipment.
- Valves, gauges and other regulating devices should be installed on compressor equipment in such a way that cannot be made inoperative.
- Air tank safety valves should be set no less than 15 psi or 10 percent (whichever is greater) above the operating pressure of the compressor but never higher than the maximum allowable working pressure of the air receiver.
- Air lines between the compressor and receiver should usually not be equipped with stop valves. Where stop valves are necessary and authorized, ASME safety valves should be installed between the stop valves and the compressor.
- The Safety valves should be set to blow at pressures slightly above those necessary to pop the receiver safety valves. Blowoff valves should be located on the equipment and shielded so sudden blowoffs will not cause personnel injuries or equipment damage.
- Case iron seat or disk safety valves should be ASME approved and stamped for intended service application.
- If the design of a safety or a relief valve is such that liquid can collect on the discharge

side of the disk, the valve should be equipped with a drain at the lowest point where liquid can collect.

- Safety valves exposed to freezing temperatures should be located so water cannot collect in the valves. Frozen valves must be thawed and drained before operating the compressor.

AIR COMPRESSOR OPERATION:

- Air compressor equipment should be operated only by authorized and trained personnel.
- The air intake should be from a clean, outside, fresh air source. Screens or filters can be used to clean the air.
- Air compressors should Never be operated at speeds faster than the manufacturers recommendation.
- Equipment should not become overheated.
- Moving parts, such as compressor flywheels, pulleys, and belts that could be hazardous should be effectively guarded.

COMPRESSED AIR EQUIPMENT MAINTENANCE:

- Only authorized and trained personnel should service and maintain air compressor equipment.
- Exposed, non-current-carrying, metal parts of compressor should be effectively grounded.
- Low flash point lubricants should not be used on compressors because of its high operating temperatures that could cause a fire or explosion.
- Equipment should not be over lubricated.
- Gasoline or diesel fuel powered compressors shall not be used indoors.
- Equipment placed outside but near buildings should have the exhausts directed away from doors, windows and fresh air intakes.
- Soapy water of lye solutions can be used to clean compressor parts of carbon deposits, but kerosene or other flammable substances should not be used. Frequent cleaning is necessary to keep compressors in good working condition.
- The air systems should be completely purged after each cleaning.
- During maintenance work, the switches of electrically operated compressors should be locked open and tagged to prevent accidental starting.
- Portable electric compressors should be disconnected from the power supply before performing maintenance.

Stop Work Authority	**Chapter:**	45
	Issued:	08.23.2019
	Revised:	04.19.2022
	Pages:	1 of 1
	Owner:	Safety Department

Purpose

The purpose of this program is to ensure that all employees understand the importance of **not** performing a job task if it cannot be performed safely and in accordance with appropriate standards.

Scope

This program applies to all Company employees.

Procedure

All employees not only have the authority to stop work when control of health, safety and environment hazard or risk is not clearly established or understood, they have an obligation to stop work.
All employees will be trained to ensure understanding of expectations and responsibility to stop work and when action should be taken.

- Upon discovery or realization that control of health, safety or environment hazard or risk is not clearly established or understood, the employee will immediately stop work.
- Employees with whom he/she is working will be immediately informed so health, safety or environment hazard or risk does not impact them or their work.
- The supervisor / competent person will be notified as soon as possible so the situation may be addressed (corrected).
- If the supervisor / competent person can successfully address the issue, work will resume. If it is not resolved, work will remain stopped until it is. Most stop work procedures can be resolved in a timely manner at the job site. On occasion, it may require additional investigation to determine the root cause of the problem and the proper procedures to proceed.
- The stop work will be documented with a Near Miss / Incident report.
    - All stop work reports will be reviewed by the supervisor / competent person
    - The supervisor / competent person and a member of the safety team will follow up once the situation has been addressed (corrected) to verify the effectiveness of all actions taken.

Employees, while fulfilling their obligation to stop work when warranted, are reminded that under no circumstances will fulfilling this obligation result in any form of retribution or intimidation from our company.

Hazard Identification & Risk Assessment	**Chapter:**	46
	Issued:	11.01.2019
	Revised:	04.19.2022
	Pages:	1 of 3
	Owner:	Safety Department

Purpose

- To provide guidelines for identifying, assessing, and controlling workplace hazards
- To ensure the potential hazards of new processes and materials are identified before they are introduced into the workplace
- To identify the jobs/tasks which require risk assessment

Scope

This program applies to routine and non-routine activities as well and new processes, changes in operation, product, or services as applicable.

Procedure

Hazard and Risk Identification

The safety department will conduct a baseline worksite hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the accompanying identified potential hazards. The results are included in a report of the hazard assessment and the methods used to control or eliminate the hazards identified. The hazard assessment report will be signed and dated.

Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work
- Legal and other requirements
- Previous incidents and non-conformances
- Sources of energy, contaminates and other environmental conditions that can cause injury
- Walk through of work environment

Hazards identifications (examples) include:

- Working alone
- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne pathogens
- Confined spaces
- Equipment operation
- General safety precautions

- Fall exposure

Policies are in place to identify potential hazards by the use of JHA, permits, inspections, site audits, toolbox meetings, incident notices, safety observations and incident investigations.

All identified hazards are then assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard.

At existing locations employees and/or subcontractors are actively involved in the identification of hazards. All employees and subcontractors affected by hazards identified in the hazard assessment process are informed of the hazards and the methods used to control or eliminate the hazard. Worker names and participation in the process will be documented on the written JHA, hazard assessment report or training sign in sheet.

All workers will be trained in the hazard identification process including the use and care of proper PPE, how to complete JHAs and hazard reporting expectations.

Unsafe hazards must be reported immediately and addressed by the supervisor. The supervisor will discuss the worksite hazard assessment with employees at the respective work location during the employees onboarding orientation.

The superintendent or project manager will notify the safety department when additional hazards are introduced into the workplace in order to revise planning and assessment needs.

Risk Assessment

Each identified hazard is assessed, classified, and ranked on severity or potential consequences of effecting injury to people, damage to assets, the environment or reputation of the company. The probability of risk exposure is then considered and applied.

Following risk assessment steps each risk assessed becomes classified as low, medium, or high in accordance with the company's risk assessment matrix. The risk level of the hazard is recorded with the associated work task within the specific safety plan.

E = Extremely High Risk
H = High Risk
M = Moderate Risk
L = Low Risk

		Probability				
		Frequent	**Likely**	**Occasional**	**Seldom**	**Unlikely**
Severity	**Catastrophic**	**E**	**E**	**H**	**H**	**M**
	Critical	**E**	**H**	**H**	**M**	**L**
	Marginal	**H**	**M**	**M**	**L**	**L**
	Negligible	**M**	**L**	**L**	**L**	**L**

Risk Controls

Risk assessment hazards are compiled with and addressed and mitigated through dedicated assignment, appropriate documentation of completion and implemented control methods including engineering or administrative controls and PPE required into the worksite hazard assessment of the site-specific tasks. No work will begin until a JHA is completed. Additionally, no risk assessed as High will be performed.

If the hazard cannot be eliminated then it must be controlled by engineering, administrative and/or PPE controls.
Engineering controls are incorporated into the process itself, sometimes as a part of equipment. Substitution could be one engineered method to follow. Administrative controls are used to minimize the exposure to a hazard by training. If the engineering or administrative controls do not achieve this then the company will ensure the appropriate PPE is available to workers and used when affected by the hazard. A combination of engineering, administrative and PPE controls may be used to achieve a greater level of worker safety.

Emergency Control of Hazards

Only employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during hazard emergency control.

Review

The hazard assessment program will be reviewed to ensure no new hazards are present. The review will include safety personnel and management.
Appropriate employees will be involved when applicable.

Remote Jobsites	**Chapter:**	47
	Issued:	04.01.2021
	Revised:	
	Pages:	1 of 4
	Owner:	Safety Department

Purpose

- To provide guidelines for identifying, assessing, controlling, and responding to workplace hazards on remote project sites
- To ensure project personnel understand risks associate with remote project sites and responsibilities for responding in emergencies.

Scope

Remote jobsites are locations where work is being performed and are 40 miles or 30 minutes from the nearest medical facility.

Procedure

Special planning considerations must be made for all remote jobsites prior to project start. A Remote Jobsite Response Team will be established and trained in specific responsibilities. The team will include at a minimum the project superintendent and a member of the safety department.

Risk Assessment

- Every emergency is different, how we handle emergencies can profoundly impact their severity. Preparation is essential when preparing for a remote jobsite and a completed risk assessment will help identify potential vulnerabilities that could negatively impact emergency action and response efforts.
- Prior to project start, the superintendent with support from the safety department and/or site safety, will review the Emergency Response Plan Risk Assessment identifying the potential vulnerabilities documenting the requested information.

Remote Project Kit

- All remote project sites will be required to have an extensive first aid kit including all standard first aid supplies and additional items to aid in timely response in the event of an emergency.
- Based on the size of the project, a minimum of one kit per site will be required
- Additional training will be required in the use of more advanced medical supplies.
- Kits will be maintained at the Job Trailer/Conex and include the following (initial when complete):
    - *Radios:* Radios will be available on the jobsite and be distributed appropriately among employees by the superintendent. Radios will improve faster

communication between the workers and the foreman/supervisor in an emergency.

- *Cell Phone Booster*: Cell phone boosters installed in all company vehicles while operating in remote locations. This will help with the immediate notification of emergency services/company representatives of an emergency. One booster per vehicle.

- *Landing Zone (LZ) Kit*: The landing zone kit will include a minimum of 5 lights to be set around the perimeter of the LZ for the pilots to identify. More information in "Landing Zone Requirements" section.

- *Stretcher/Spine Board*: For transporting employees with major injuries or employees who are unaware of the situation or surroundings. Company supervisors are permitted to transport injured employees to medical care facilities in the event of a medical emergency that is determined to be life threatening and waiting for emergency services could cause the injured employee further harm or death. Transportation of injured employees by supervisors should only occur after emergency services have been called for an estimated time of arrival and medical advice. DO NOT move or transport injured employee if the injured employee has or appears to have bodily damage to the neck, back or spine, first aid and transportation should only be performed by emergency service personnel. These stretchers/back boards will need to be kept at the Job Trailer/Conex.

Landing Zone Requirements

A Landing Zone will allow a helicopter to approach and depart in emergency situations where other timely means are not available.
The project superintendent with the support of safety will arrange a site walk with local EMS to establish the most suitable space for a landing zone.

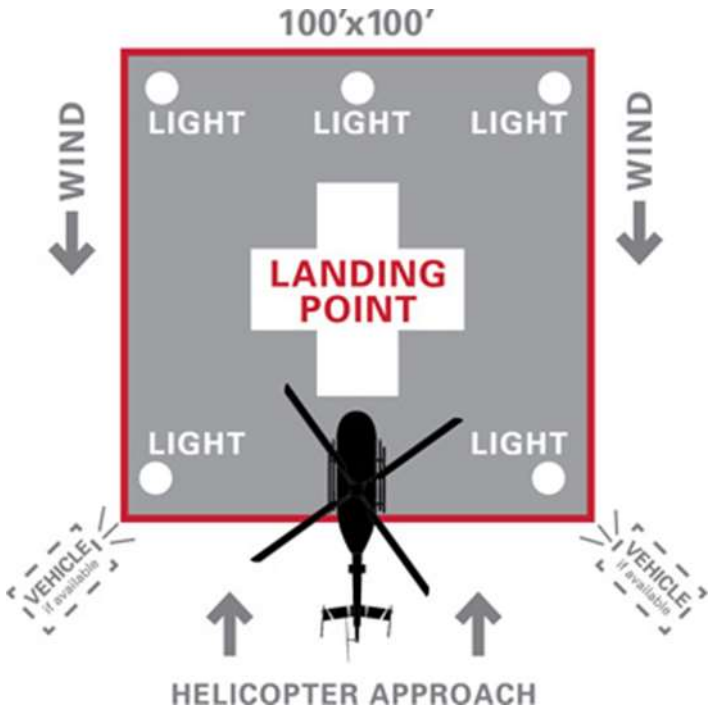
- The predetermined landing zone must be kept clean and clear for the duration of the project. (No equipment parked, maintain grass (shorter than knee level), trash/debris etc.)
- Supervisors be prepared to give helpful landmarks to Emergency Responders to relay to the pilot. Examples including Water/Radio towers, High power lines, or Major road intersections.
- Criteria for identifying a landing zone:
  - Minimum of 100' Wide X 100' Long
  - Level with a firm surface

- Clear of sand, gravel, tall grass, and other debris
- No power lines, trees, poles, buildings, or other overhead obstructions near or in the area
- Avoid sloped areas.

Marking Landing Zone:

All superintendents assigned to remote jobsites will be trained in landing zone set up and marking.

- The landing zone kit will include a minimum of 5 lights. One will be placed at each corner of the LZ and the other between the corners that the wind is blowing from (see picture below).
- Keep vehicles, equipment, and workers at minimum 100' away from landing zone.
- Do not place vehicles during daylight operations.
  - A smoke canister can be used by the Emergency Responder if they believe it to be necessary during daylight operation.



Emergency Response Care:

Care Flights must be requested by a communication center or a requesting agency.
The following information can vary by location and company but provides a basic list of care flight requirements and criteria.
The determination of requesting a medical helicopter could be made by a project superintendent, but the call must come from authorities.
The company used to transport an injured employee will vary with the location of the jobsite.
Criteria used by authorities to determine if requesting a Care Flight is necessary:

- The transport time by ground poses a threat to survival or recovery.
- The available ambulance service does not have the equipment or clinical scope to properly care for the patient during transport.
- Weather, road conditions or other factors might delay patient delivery to definitive care.
- Known or suspected critically ill or injured patients are in the backcountry.

Information requested from Care Flight agency:

- Requesting agency name
- Call back number.
- Number of Patients (you may request a rider subject to pilot's discretion)
- Location (Latitude/Longitude if possible -or- 'one mile north of the intersection of highway 1 and Road')
- Weight
- Patient's chief complaint

Medical Criteria

- Adult and pediatric patients requiring emergent and time-sensitive transport, as well as advanced medical monitoring for patients requiring higher levels of care and treatment for conditions including cardiac, high-risk obstetrics, neurological, hemodynamically compromised, or other critical emergencies.
- Burns requiring treatment in a burn center. Care Flight can fly directly to regional burn centers eliminating unnecessary delays and ensure timely treatment.
- Potentially life-threatening trauma requiring treatment at a trauma center, including penetrating eye injuries.

Erection	**Chapter:**	48
	Issued:	04.01.2021
	Revised:	05.10.2021
	Pages:	1 of 3
	Owner:	Safety Department

Purpose

To provide guidelines for the erection process and techniques in use most representative of good erection practices

Scope

This procedure applies to all project sites where erection activities are being performed.

Procedure

Site Preparation
Proper planning and communication prior to steel erection operations are essential to safety. Many accidents involving collapse could have been avoided had adequate planning taken place. The following requirements apply to erection activities as applicable.

- Approval
  No steel erection may begin without the following:
  - The controlling contractor must ensure in writing, the following:
    - Concrete footings, piers, and walls have been cured to a level that will provide adequate strength to support any forces imposed during steel erection.
    - Anchor bolt repairs, replacements and modifications were done with the approval of the Structural Engineer of Record
- <u>All transmittals will indicate the status of approval and release for erection.</u>

- Site Layout
  To perform necessary operations in a safe manner, the following must be provided and maintained:
  - Access roads into and through the site adequate for safe travel / movement of cranes, truck, necessary equipment, and materials.
  - Methods for pedestrian and vehicle control
  - Area adequate for storage of materials and safe operation of equipment. Area must be:
    - Firm
    - Properly graded.
    - Drained
    - Readily accessible to the work

- Site Conditions
  Documentation that all site conditions have been met to ensure any special erection conditions such as the use of shores, jacks or loads that must be adjusted as erection progresses are addressed.

- Pre-Planning
  All hoisting operations must be pre-planned to ensure the following:
  - Employees are not working directly below suspended loads, with the exception of employees engaging in the initial connection of the steel, and employees responsible for hooking and unhooking the load.
  - Where employees must work under the load, the materials being hoisted must:
    - Be rigged to prevent unintentional displacement.
    - Prevented from slipping by the use of hooks with self-closing safety latched.
    - Rigged by a qualified rigger.

- Site Specific Erection Plan
  A site-specific erection plan will be developed as a means of providing employee protections. The plan will be developed by a qualified person(s) and available at the work site.

  The safety plan will be available and readily accessible to all personnel affected by the safety management system.

  Components of the site-specific erection plan include identification of the site and project and the following:

  - The sequence of erection activity including:
    - Material deliveries
    - Material staging and storage.
    - Coordination of other trades and construction activities

  - A description of the crane selection and placement procedures including:
    - Site preparation
    - Path for overhead loads
    - Critical lifts, including rigging supplies and equipment.

  - A description of steel erection activities and procedures including:
    - Stability considerations requiring temporary bracing.

- Erection bridging terminus point.
- Notifications regarding repair, replacement and modifications of anchor bolts/rods
- Connections
- Decking
- Ornamental and miscellaneous iron

- A description of the fall protection plan that will be used.
- A description of the falling objects plan that will be used.
- A description of special procedures required for hazardous non-routine tasks.
- A certification for each employee training in steel erection
- A list of qualified and competent persons
- A description of procedures used in the event of a rescue or emergency.

COVID Protocol	**Chapter:**	49
	Issued:	04.01.2022
	Revised:	09.19.2022
	Pages:	1 of 2
	Owner:	Safety Department

Purpose

To provide guidelines and expectations for response COVID-19

Scope

This procedure applies to all company locations

Procedure

The Company will follow guidance provided by the CDC and update the COVID Response Summary as appropriate.

- Masks will be available at all work locations.
- Sanitizer will be available at all work locations.
- Employees must comply with handwashing and good hygiene practices.
- Shared spaces and contact surfaces will continue to be regularly cleaned and sanitized.
- COVID Response Summary document will be updated and communicated to all employees and provides additional directions (see attached “COVID-19 Response Summary and Isolation Guidelines 09.19.2022”).
- Employees should NOT report to work if they:
    - Have a fever over 100.4. Must be fever-free for 24 hours before return.
    - Have a persistent cough
    - Are experiencing vomiting or diarrhea.
    - All symptoms must be resolved before returning
    - Employee must report exposure and symptoms to their supervisor

COVID-19 Response & Isolation Guidelines

Updated *09.19.2022*

Scenario	Risk Level	Required Action
Employee tests positive for COVID-19 and has symptoms.	High	• Isolate for 5 days from date of positive test. • Symptoms must have improved before returning to work. • Must be fever free for a minimum of 24 hours. • Wear a mask for 5 days when within 6' of others after returning.
Employee tests positive for COVID-19 but has no symptoms.	Medium	• Isolate for 5 days from date of positive test. • Wear a mask for 5 days when within 6' of others after returning.
Employee has symptoms of COVID-19 and had close contact with someone who tested positive or is presumed to have COVID-19.	Medium	• May return to work if positive in the previous 90 days. • Isolate for 5 days from the date of contact. • Symptoms must have improved before returning to work. • Must be fever free for a minimum of 24 hours. • Wear a mask for 5 days when within 6' of others after returning.
Employee has symptoms of COVID-19 but has no known close contact with a person who tested positive or is presumed positive.	Medium	• Employee may continue to work and must wear a mask for a minimum of 10 days when within 6' of others. • Symptoms must have improved before returning to work. • Must be fever free for a minimum of 24 hours.
Employee has no symptoms of COVID-19 but has had a close contact with someone who tested positive or is presumed to have COVID-19 and was not wearing acceptale face coverings/mask	Medium	• Employee may continue to work and must wear a mask for a minimum of 10 days when within 6' of others. • Monitor symptoms.
Employee has no symptoms of COVID-19 but lives with a roomate or family member who is experiencing symptoms of COVID-19 or has been isolated (but not positive)	Medium	• Follow hygiene recommendations (hand wash, cover nose/mouth when coughing or sneezing, avoid touching face). • Monitor own symptoms. • Must wear mask when within 6' of others.
Employee had close contact with a person who had close contact with someone else who tested positive or is presumed to have COVID-19	Low	• Employee is low risk and should continue working and monitor own symptoms.
Employee was in a facility or crowd with someone who tested positive or is presumed to have COVID-19. The employee was not aware of being in close contact and has no symptoms of COVID-19	Low	• Employee is low risk and should continue working and monitor own symptoms.

- **Employees must notify their supervisor of all exposures and/or symptoms.**
- **Masking is optional except as indicated above.**
- **Masks will be available at all work locations.**

COVID-19 Quarantine and Isolation | CDC

Contact HR/Safety for additional information.

If you have *no symptoms*:
- Day 0 is the day you were tested, not the day you received the results.
- Day 1 is the first full day following the day you were tested.
- If you develop symptoms within 10 days, the clock restarts at day 0 on the day of symptom onset.

If you *have symptoms*:
- Day 0 is the day of symptoms onset, regardless of when you tested positive.
- Day 1 is the first full day after the day your symptoms started.