P&C Construction
Safety Manual

Safety Policy Statement

The management is committed to providing employees with a safe and healthful workplace. We truly care about the safety, health, and wellbeing of all our employees.

Our safety program is designed to preserve the greatest assets we have, our employees. We will comply with the standards of all applicable regulatory agencies and incorporate company best practices. It is the obligation of each employee to use safe work practices and to insist that all other employees on the job do the same. Accidents, even minor ones, cause pain, both physical and mental. Prevention of injury and illness is a goal worthy of our best efforts. Employees must report all accidents, injuries, and unsafe conditions to their supervisors. The key to accident prevention is a safety culture where each employee accepts his/her responsibility to aid in the prevention of accidents.

We strive for the highest safety standards on our projects. Safety does not occur by chance; it is the result of careful attention to all company operations by those who are directly and indirectly involved. Employees at all levels must work diligently to execute the company's policy of maintaining a safe and healthful workplace. Employee recommendations to improve safety and health are invited and will be given thorough consideration by our management team.

No phase of our operation is considered more important than employee safety. It is also the policy of this company that employees immediately report unsafe conditions and do not perform unsafe work tasks. Additionally, compliance with the safety rules is required of all employees as a condition of employment. Management will take disciplinary action against any employee who willfully or repeatedly violates workplace safety rules. This action may include verbal and/or written reprimands and may result in termination of employment.

This policy statement serves to express management's commitment and involvement in providing our employees a safe and healthful workplace.

Steve Malany

President

SAFETY AWARDS

NATIONAL CHAMPION SAFETY PROGRAM

2019 & 2020

2015 & 2016

2016 2017 2018 2019

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SAFETY ROLES AND RESPONSIBILITIES

Safety Roles and Responsibilities

1. **Senior Leadership**
   - 1.1. Provide a safe and healthful place of employment, free from recognized safety and health hazards that are likely to cause injury or death to our employees.
   - 1.2. Dedicate resources to the safety program.
   - 1.3. Assign responsibilities, authority, and accountability.
   - 1.4. Support the safety program in conversations, written communications, training, meetings, and inspections.
   - 1.5. Conduct periodic safety performance reviews.
   - 1.6. Conduct periodic site audits with Safety Program Administrator.
   - 1.7. Hold all personnel accountable and appropriately rewards excellence.
2. **Chief Safety Officer – MHA**
   - 2.1. Provides advice to senior leaders, superintendents, and foremen supervisors on relevant regulations and practices regarding safety and health.
   - 2.2. Assists in project safety and health planning.
   - 2.3. Conducts periodic inspections of job sites.
   - 2.4. Advises management and employees in hazard recognition and control.
   - 2.5. Trains field leaders on accident investigation.
   - 2.6. Acts as the company's liaison with regulatory agencies and insurance representatives.
   - 2.7. Conducts new hire orientation.
   - 2.8. Maintains records for company needs and compliance with regulations.
   - 2.9. Coordinates and/or participates in the investigation of accidents, injuries, and significant close calls to identify the root causes to correct or eliminate them.
3. **Safety Coordinator - MHA**
   - 3.1. Advise superintendents, and foremen supervisors on relevant regulations and practices regarding safety.
   - 3.2. Assists in project safety planning.
   - 3.3. Conducts routine inspections of job sites.
   - 3.4. Sits on safety committee.
   - 3.5. Aids employees in hazard recognition and control.
   - 3.6. Aids field leaders on accident investigation.
   - 3.7. Participates in the investigation of accidents, injuries, and close calls to identify the root causes to correct or eliminate them.

Safety Roles and Responsibilities

4. Project Manager

4.1. Ensures that safety and health issues are managed with the same priority as production and quality, and when they conflict, safety will take priority.

4.2. Protects budgets for project safety resources.

5. Superintendent

5.1. Responsible and accountable for project safety.

5.2. Commits to ensuring the safety of every employee in the workplace and leads by example.

5.3. Assures that all subcontractors comply with their contracted safety obligations.

5.4. Ensures the implementation and enforcement of the safety program.

5.5. Schedules/coordinates pre-planning meetings for projects.

5.5.1. Safety document meeting with Safety Program Administrator

5.5.2. Pre-cons with high risk subs

5.5.2.1. Roofers

5.5.2.2. Erectors

5.5.2.3. Excavators

5.5.2.4. Others based on the project

5.6. Works with the Safety Program Administrator to develop safety planning documents prior to construction.

5.7. Conducts monthly site audits

5.8. Coordinates project safety meetings and weekly and/or daily toolbox meetings.

5.9. Reviews in investigations every accident and close call.

6. Foreman

6.1. Monitors safety performance of all employees and subcontractor workers on projects.

6.2. Conducts enforcement of the safety program.

6.3. Conducts subcontractor site orientations or delegates.

6.4. May lead daily huddles and stretch and flex.

6.5. May lead weekly safety meetings and/or daily toolbox.

6.6. Holds subcontractor foremen and workers accountable for safety of their workers.

6.7. Investigates every accident and near miss. and provides documentation to safety team.

6.8. Monitors individual employees' safe work practices.

Safety Roles and Responsibilities

7. Project Engineer

7.1. Collects required subcontractor safety documents

7.1.1. SSSP

7.1.2. Silica Plan

7.1.3. Roof Safety and Rescue Plan

7.1.4. SDS

7.2. Manages necessary subcontractor compliance and assists the foreman with document management

8. Employee

8.1. Works in a safe manner at all times

8.2. Follows all safety rules, procedures, and requirements.

8.3. Report any injury or near miss, no matter the severity, to their supervisor immediately.

8.4. Attends and participates in weekly, daily, and monthly safety and health meetings.

8.5. Utilizes and inspects supplied safety equipment.

8.6. Helps complete pre-task plans for unsafe conditions; does not proceed with work if unsafe conditions exist or corrects safety hazards under their authority.

8.7. Reports unsafe conditions to supervisor immediately.

8.8. Maintains employer and personal tools and personal protective equipment.

8.9. Inspects all tools, machines, and equipment prior to use.

8.10. Operates tools and machines following safe work practices.

8.11. Keeps work area clean and orderly at all times.

8.12. Participates in the safety program.

SAFETY COMMITTEE POLICY

Safety Committee

Since the company provides onsite training monthly, our safety committee exists to provide opportunities for all levels of office and field workers to be exposed to safety management and to assist in reviewing current incidents and close calls as well as discuss policy and work procedures in a non-adversarial environment through the following.

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Schedules and chairs the meetings.

1.1.2. Prepares agenda in Procore.

1.2. Secretary

1.2.1. Appointed Role: updates minutes in Procore and distributes.

1.3. Member

1.3.1. Attends meetings.

1.3.2. Volunteers for varies research and site visits.

1.3.3. Contributes to analysis to review incidents and identify trends.

2. Procedures – Safety Committee

Since the company is using the safety committee in addition to the OSHA requirement, the following procedures will be in place.

2.1. Employee representatives will be volunteers or selected by their peers.

2.2. Membership: 20 or fewer employees must have at least two members. Companies with greater than 20 employees must have at least four members.

2.3. Employer representatives will be selected by the employer.

2.4. There is no formal length of service terms. However, volunteer members opt in or out as their schedule allows in December for the following year.

2.5. The committee will hold regular meetings once per quarter.

2.6. The date, hour, and location of meetings will be determined by the Safety program administrator.

2.7. Agendas and meeting minutes are kept on file in Procore for a period of at least three years.

2.8. Copies of the minutes are to be provided to Safety Committee members.

2.9. Meeting notes are available at job sites.

2.10. Evaluate all accident and incident investigations and make recommendations for ways to prevent similar events from occurring.

2.11. Work with safety program administrator to identify unwelcome trends.

2.12. Review inspection reports and for making recommendations to management.

2.13. Make safety committee meeting minutes available to all employees.

2.14. Evaluate management's system for safety and health and recommend improvements.

RETURN TO WORK

Return to Work

This document is not designed as a substitute for reasonable accommodation under any applicable federal or state laws, such as Americans with Disabilities Act, The Rehabilitation Act of 1973, or other applicable laws.

1. Objectives

1.1. In the event of a lost time injury, the companies will work with SAIF using our return-to-work policy designed to return workers to employment at the earliest date following any injury or illness. We desire to speed recovery from injury or illness and reduce insurance costs. This policy applies to all workers.

1.2. The company defines "transitional" work as temporary modified work assignments within the worker's physical abilities, knowledge, and skills per the physicians written instructions when available.

1.3. The company will determine appropriate work hours, shifts, duration, and locations of all work assignments. The company reserves the right to determine the availability, appropriateness, and continuation of all transitional assignments and job offers. For any business reason, at any time, we may elect to change the working shift of any employee based on the business needs of this company.

2. Communication

2.1. It is the responsibility of the worker and/or supervisor to immediately notify the Safety Program Administrator of any changes concerning a transitional/temporary work assignment. Personnel will then communicate with the insurance carrier and attending physician as applicable.

2.2. Worker Able to Return to Work

2.2.1. If the attending physician releases the worker to return to work, as evidenced by completion of a **Release to Return to Work** form and **job description** form, the form(s) must be returned to Personnel within 24 hours for assignment of light duty/modified work. The worker must report for work at the designated time.

2.2.2. The **worker cannot return to work without a release** from the attending physician.

2.2.3. If the worker returns to a transitional/temporary job, the worker must make sure that he or she does not go beyond either the duties of the job or the physician's restrictions. If the worker's restrictions change at any time, he or she must notify his or her supervisor at once and give the supervisor a copy of the new medical release.

2.3. Worker Unable to Return to Work

2.3.1. If the worker is unable to report for any kind of work, the worker must call in at least weekly to report medical status.

2.3.2. While off work, it is the responsibility of the worker to supply Safety Program Administrator with a current telephone number (listed or unlisted) and an address where the worker can be reached.

2.3.3. The worker will notify the Safety Program Administrator within 24 hours of all changes in medical condition.

3. Employer Responsibilities

3.1. Accident Reporting

3.1.1. Completed **Release to Return to Work** form from attending physician and medical

documentation, if appropriate

3.1.2. Completed transitional/modified or regular **job description**

3.1.3. **Job offer** letter and responses

3.1.4. The Safety Program Administrator will notify the insurance carrier of any changes in the worker's medical or work status as soon as possible.

3.2. **Medical Treatment and Temporary/Transitional Duty Physical Condition**

3.2.1. A **Release to Return to Work** form and a completed **job description** form (if available) will be provided to the worker to take to the attending physician for completion and/or approval.

3.2.2. At the time of first medical treatment a **Release to Return to Work** form must be completed and returned to the Safety Program Administrator. If one is not, personnel will request one from the attending physician.

3.2.3. The completed **Release to Return to Work** form will be reviewed by the Safety Program Administrator. A temporary/transitional **job description** form will be prepared from information obtained from the attending physician for review and approval.

4. Job Offer Letter

4.1. Upon receipt of a signed temporary/transitional **job description** form from the attending physician, a written **job offer** letter will be prepared by the employer. It will be mailed by both regular and certified mail to the worker's last known address or presented to the worker.

4.2. The letter will note the doctor's approval and will explain the job duties, report date, wage, hours, report time duration of transitional work assignment, phone number, and location of the transitional assignment.

4.3. The worker will be asked to sign the bottom of the **job offer** letter indicating acceptance or refusal of the offered work assignment.

4.4. Copies of the **job description, work releases, and job offer letters** will be forwarded to the insurance carrier.

5. Supervisor

5.1. The supervisor will monitor the worker's performance to ensure the worker does not exceed the worker's physician release.

5.2. The Safety Program Administrator will monitor the worker's recovery progress through regular contact to assess when and how often duties may be changed. The supervisor will assess the company's ability to adjust work assignments upon receipt of changes in physical capacities.

5.3. Superintendents are required to participate in weekly meetings with the Safety Program Administrator and worker to discuss their condition, future appointments, effort level at work and work attendance.

SAFETY ENFORCEMENT

Safety Enforcement

We will utilize the progressive disciplinary procedure based on the severity of the offense as outlined below. The unsafe condition will be corrected, necessary training will be provided, and documentation will be completed.

1. S.O.P.

1.1. Superintendent

1.1.1. The Super is ultimately responsible for safety on the site. As the Super, your insistence on a fully functioning safety enforcement program is critical. Your participation both verbally and by working with your foreman, as a show of strength, is vital.

1.2. Foremen

1.2.1. The Foreman is the front-line owner of the safety enforcement program. Your strict adherence to this program and its required documents gives "the back-bone" and strength to our entire safety culture.

1.3. Steps

1.3.1. When an **at fault** incident, close call or violation of safety polices/procedures occurs

1.3.1.1. Identify witnesses

1.3.1.2. Print the Safety Enforcement Form

1.3.1.3. Fill it out and get it signed (for formal written consequences)

1.3.1.4. **For P&C:** Upload the completed document into Procore (P&C) and upload to a new line on the Smartsheet Enforcement Log (Subs). For Ward-Henshaw, for Employees, upload to Smartsheet Field worker list, increase the count in the enforcement

1.3.1.5. **For Ward-Henshaw**

1.3.1.5.1. Employees: upload to Smartsheet Field worker list, increase the count in the Enforcement row, make and save a comment in the dialog bubble by the paper clip and attach the scanned document to the paper clip.

1.3.1.5.2. Subs: Upload the completed form to the Smartsheet Enforcement Log.

2. Levels

2.1. Level 1: Verbal Warning…First at-fault accident, incident, near-miss, or violation of policies/procedures or safety violation in a 1-month period

2.1.1. Verbal warning documentation will be placed the Smartsheet Field Worker List if recipient is an MHA employee and Smartsheet Enforcement log if a subcontractor. P&C create an Observation and save the document there also.

2.1.2. Appropriate retraining provided, if necessary.

2.1.3. If no other infractions happen within 90 days. Employee returns to zero.

2.2. Level 2: 2nd at-fault accident, incident, near-miss, or violation of policies/ procedures or safety violation in a 1-month period since the last infraction

2.2.1. Formal written document…documentation will be placed the Smartsheet Field Worker List if recipient is an MHA employee and Smartsheet Enforcement log if a subcontractor. P&C create an Observation and save the document there also.

Safety Enforcement

2.2.2. Appropriate retraining provided, if necessary.

2.2.3. If no other infractions happen within 90 days. Employee returns to zero.

2.3. Level 3: Third at-fault accident, incident, near-miss, or violation of policies/ procedures or safety violation in a 1-month period since the last infraction

2.3.1. Formal written document…documentation will be placed the Smartsheet Field Worker List if recipient is an MHA employee and Smartsheet Enforcement log if a subcontractor. P&C create an Observation and save the document there also.

2.3.2. Mandatory discussion with Dave VanVleck and Safety Program Administrator or John Scott and Safety Program Administrator for employees and Subs

2.3.3. Appropriate retraining provided, if necessary.

2.3.4. If no other infractions happen within 90 days. Employee returns to zero.

2.4. Final violation will result in termination or removal from site. Documentation placed in employee's personnel file.

Note: The Company reserves the right to apply appropriate discipline, based upon safety and health infraction, up to and including termination or removal without warning.

SUBSTANCE ABUSE POLICY

Substance Abuse Policy

The company will not allow someone who abuses alcohol and/or drugs to do so while in their employment or under their direction.

Drugs in this context include prescribed medications, over-the-counter medications when over-used or over-prescribed, recreational drugs, and illegal drugs.

The company works with a trust to ensure the privacy and care of workers who test positive. The company's goal is to provide care and rehabilitation opportunities for our workers.

1. Substance Abuse Overview

1.1. The use, possession, or sale of alcohol and drugs while on the job at any location is strictly prohibited at any time.

1.1.1. **"Use" or "under the influence,"** in this case, includes coming to work with the presence of any detectable amount of any illegal drugs, recreational drugs, or alcohol in an employee's system while performing company business or on company property.

1.1.2. **Possession means** on your person, in your tool kit, in your motor vehicle, or in any area under your control, including your locker, tool crib, storage area, desk, etc. Drugs include prescription medications if used in circumstances other than under a physician's strict supervision. The use of prescription medications or over-the-counter medications that would affect safety while on the job should be reported to your supervisor, human resources, or safety program administrator.

1.2. Persons "under the influence" or seen to be using or in possession of alcohol or drugs will be disciplined up to and including immediate dismissal, depending on the circumstances of the situation. The final decision on the action to be taken will be made by the president of this company.

1.3. The company reserves the right to call for a random crew wide or job wide random drug test when reasonable suspicion criteria are met.

2. Marijuana

Marijuana is a Schedule 1 controlled substance; its use is illegal under federal law. Some states permit marijuana for personal/recreational use or to treat medical conditions when authorized in writing by a licensed medical doctor ("medical marijuana"). These are not valid reasons for the presence of marijuana in employees' systems under this policy. Marijuana use is prohibited regardless of the reason for the use.

3. Testing

3.1. Company policy requires testing at the following times.

3.1.1. New employees who do not possess a current test card.

3.1.2. Randomly as part of the ongoing random testing program.

3.1.3. When there is reasonable suspicion of intoxication.

3.1.4. When the employee is involved in an incident that may be related to drug use.

3.2. For work outside the coverage area of the Drug Trust.

3.2.1. Swabs will be used for pre-employment screenings. A positive test will prohibit the worker from being hired.

Substance Abuse Policy

4. Positive Tests

4.1. The company works with the Employee Assistance Program.

4.1.1. All positive tests are under the jurisdiction of the Employee Assistance Program.

4.2. The company requires the Employee Assistance Program's recommendation to return to work.

4.2.1. Employees may return to work only after a negative test.

4.2.2. Completion of counseling and rehabilitation may be prescribed by the Employee Assistance Program.

4.2.3. Returning workers must sign a return to work or last chance agreement prior to returning. Failure to comply with any of the stipulations in the agreement will result in termination.

RECORDKEEPING

Recordkeeping

OSHA and workers' compensation carriers have recordkeeping requirements. This company complies with these requirements.

1. OSHA 300 Log Requirements

1.1. Fatalities

1.1.1. Fatalities will require notification to Oregon OSHA in person or by telephone within eight hours of occurrence.

1.2. Catastrophe

1.2.1. A catastrophe is an incident where two or more employees are fatally injured, or three or more employees are admitted to a hospital or an equivalent medical facility (for example, a clinic) as a result of the same incident. Catastrophes will require notification to Oregon OSHA in person or by telephone within eight hours of occurrence.

1.3. Injury Reporting Requirements

1.3.1. In-patient hospitalization, eye loss, or amputation or avulsions that result in bone loss will require notification to Oregon OSHA in person or by telephone within 24 hours of occurrence.

1.3.2. In-patient hospitalization is formal admission to the hospital for medical treatment (includes first-aid). Hospitalization for observation only is not reportable, nor is emergency room treatment.

2. OSHA 300 Log Flow-Chart

2.1. See OSHA 300 log flow-chart below.

3. Workers' Compensation Claims

3.1. Workplace injuries will be reported immediately. The law allows up to five days to report an injury.

4. Medical and First Aid Treatment

When an employee receives medical treatment, it requires a set of 801 forms. The treatment an employee receives for an injury determines whether a case is recorded or not. The following guidelines may be used to determine if an injury or illness is reportable:

4.1. Removal of foreign object from the eye

4.1.1. Object removed by using only irrigation or cotton swab .....Not recorded

4.1.2. Object is imbedded in the eye .....Recorded

4.2. Burns regardless of size or degree

4.2.1. Results in days away from work, work restrictions, medical treatment, etc. .....Recorded

4.3. Administering of medication

4.3.1. Non-prescription medication at non-prescription strength .....Not recorded

4.3.2. Non-prescription medication at prescription strength.....Recorded

4.3.3. Prescription medication, one or more doses.....Recorded

4.3.4. Tetanus immunizations .....Not recorded

Recordkeeping

4.3.5. All other immunizations or boosters ..... Recorded

4.4. Using hot or cold therapy, massages ..... Not recorded

4.5. Using temporary immobilization devices while transporting accident victim ..... Not recorded

4.6. Use of any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, finger guards, etc. ..... Not recorded

4.7. Hearing threshold shift of 25 dB from employee's original baseline ..... Recorded

4.8. Loss of consciousness, regardless of length ..... Recorded

4.9. Cut/puncture/sliver

4.9.1. Sutures ..... Recorded

4.9.2. Bandages, Band-Aids, gauze pads, butterfly bandages, Steri-Strips, eye patches ..... Not recorded

4.9.3. Removal of splinters or other foreign objects from areas other than eye by irrigation, tweezers, cotton swab, or other simple means ..... Not recorded

4.9.4. Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister ..... Not recorded

4.10. Fluid replacement for heat stress

4.10.1. Drinking ..... Not recorded

4.10.2. Intravenously ..... Recorded

4.11. Sprain/strain and soft tissue injuries involving medical treatment, days away, job transfer, or work restriction ..... Recorded

4.12. Restriction of work ..... Recorded

4.13. Transfer to another job ..... Recorded

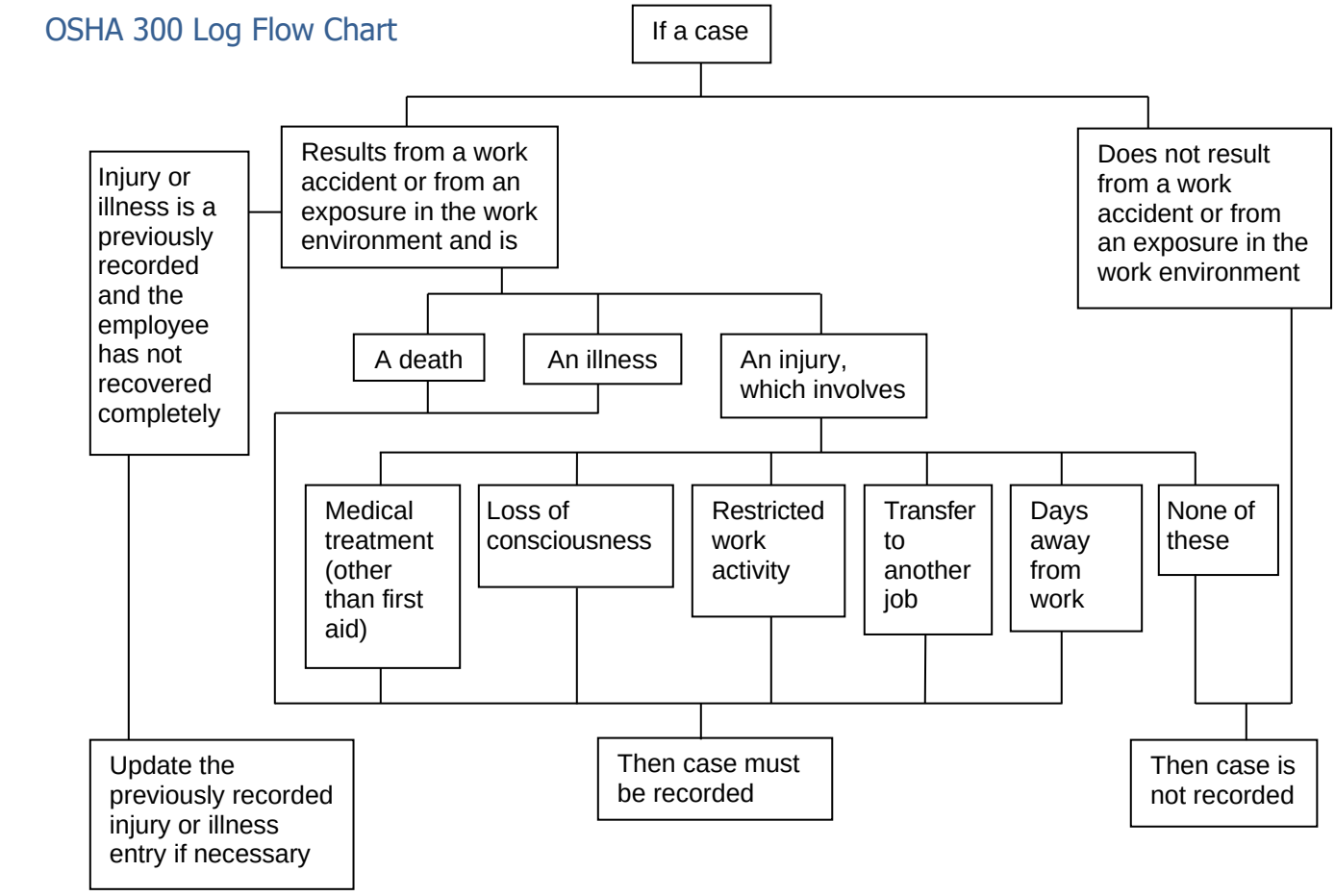
4.14. Days away from work ..... Recorded

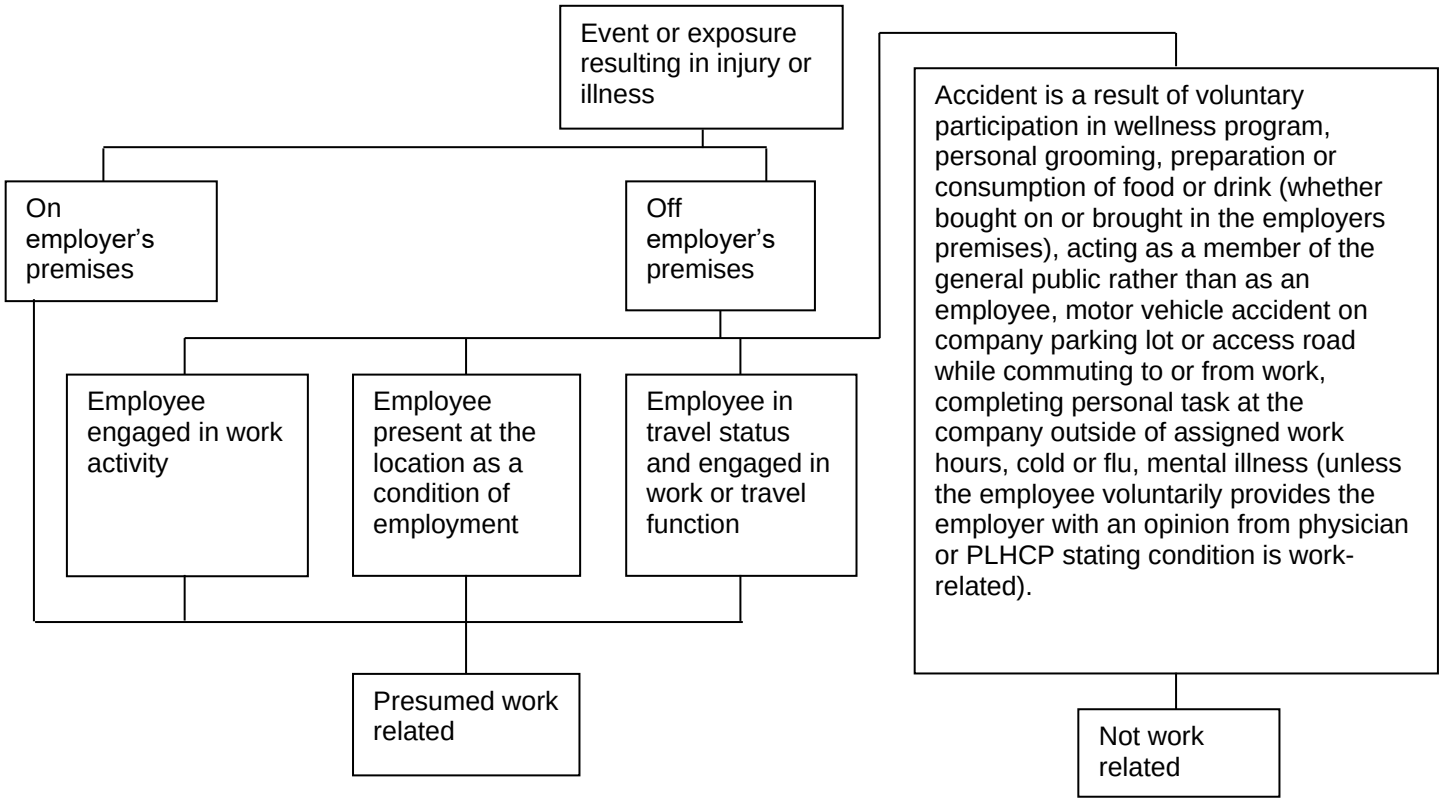
4.15. Needle sticks ..... Recorded

- ☐ Information must be recorded within seven calendar days after information is received.
- ☐ All calendar days are counted for days away from work and job transfer or restriction; stop counting when either or a combination reach 180 calendar days.
- ☐ An injury and illness report must be filled out: OSHA's form 301 or other reports containing the same information as the 301 may be used.
- ☐ Privacy cases may be used for illness or injury to an intimate body part or from sexual assault; HIV, hepatitis, or tuberculosis infections; needle stick; and sharp injuries.
- ☐ Post form 300A from February 1 through April 30.
- ☐ Retain forms for five years following the year that they covered.

Recordkeeping

OSHA 300 Log Flow Chart





CRISIS MANAGEMENT

Crisis Management Plan

This Crisis Management Plan is a detailed guide outlining the policies and procedures to be followed by the company in case there is an emergency that impacts normal workplace operations. The Crisis Management Plan provides guidance to personnel through a developing crisis, as well as plan for various types of emergencies that may constitute a crisis.

Definition of a Crisis:

- Normal operational procedures are severely impacted.
- Traumatic events or situations occur.
- The lives and the well-being of employees are directly impacted.

The Crisis Management Plan Goals are to:

- Provide guidance to managers regarding appropriate procedures and resources.
- Protect the safety and well-being of all employees.
- Provide for the care of employees and their families through personnel services and EAP.
- Minimize post-traumatic stress reaction among employees.
- Ensure that accurate and appropriate information about the incident is conveyed to appropriate audiences both inside and outside the Project site.
- Plan the orderly return of the workplace to a normal mode of operation.
- Outline preventative measures which should be taken in advance.

Catastrophic Accidents and Fatalities

In the event of a fatality the Incident Response Checklist must be followed.

Crisis Management Plan – Senior Person On-Site

INCIDENT RESPONSE CHECKLISTS

Senior Person On-Site: (Check items when completed)

- ☐ Attend to injured worker.
- ☐ Do not attempt to rescue in a confined space unless certified to do so with proper rescue gear.
- ☐ Designate someone to stay with the injured worker(s) at the hospital until family members arrive.
- ☐ Contact (911).
- ☐ Secure the scene.
- ☐ Do not move anything that could be classified as evidence and rope off incident site.
- ☐ Post two (2) workers to restrict entry to the site and direct emergency vehicles.
- ☐ Establish a command center and off-site safe assembly zone for workers and media.
- ☐ Direct site personnel to predetermined assembly and make certain that all employees are accounted for. Sound Horn 3 times.
- ☐ If the site will be shut down, have them contact families to let them know they are ok and give them tell workers they will be told when to report back to work. Direct any information requests from outside groups to you. Ban phone use.
- ☐ Identify any witness(s), separate them and set them up with pen and paper to begin their witness statements. Dave and Rick will help them complete them upon arrival.
- ☐ Keep selected individuals on-site to help with incident.
- ☐ Ensure any surrounding areas that may be affected by the incident are notified.
- ☐ **Contact Incident Response Team Leader:**

P&C CONSTRUCTION	WARD-HENSHAW & BAKER YORK
Primary: Steve Malany at 503.572.7290 (Cell)	Primary: Bruce Heintz at 503.572.7291 (Cell)
Back Up: Brian Shoemaker at 503.572.5749 (Cell)	Back Up: Mike Eubanks at 503.475.9529 (Cell)

- ☐ **Contact the Chief Safety Officer:**

P&C CONSTRUCTION	WARD-HENSHAW & BAKER YORK
Primary: Rick McMurry at 971.352.2463 (Cell)	Rick McMurry at 971.352.2463 (Cell)
Secondary: Dave Van Vleck at 503.969.8240 (Cell)	Back Up: John Scott at 971.352.1145 (Cell)

- ☐ If the incident involves a sub-contractor, contact their owner and inform them of the details.
- ☐ Notify principal if on a school job.

(Continued on back)

☐ Senior person on site is the temporary spokesperson prior to the arrival of the spokesperson.

☐ What to say if the media calls? (Deliver this initial statement):

What to Say If the Media Calls

"My name is _____ (your name) and I am the _____ (your title) with _____ (Company). The incident has just happened, and we are not prepared to answer any questions at this time. Please stay in this safety area so we can do our job to take care of the situation. I need to return to the site; someone will be back at (estimate time) with an update. Thank you.

IMPORTANT: **Do not take any questions at this time.** If badgered, simply state that you need to get back to the site and you will return at the stated time.

Crisis Management Plan – Team Leader

INCIDENT RESPONSE CHECKLISTS

Team Leader: (Check items when completed)

Primary: Steve Malany Back-up: Brian Shoemaker

Primary: Bruce Heintz Back-up: Mike Eubanks (Tanks) Geoff McGraw (Structural)

- ☐ Get up to speed on incident. Briefed by Senior Person in charge.
- ☐ Determine if the site should be shut down.
- ☐ Identify potential spin-off crises.
- ☐ Determine if law enforcement or another agency needs to be contacted.
- ☐ Determine situational assessment to and determine spokesperson.
- ☐ Remind all members of the Response Team and employees involved in the crisis that all communication must be by the Response Team only. No electronic communication or phone calls by anyone else. The response team's email and phone communications must be limited to factual information only and not subject to speculation. Eliminate all radio traffic.
- ☐ Notify Project Owner.
- ☐ If there is an employee injury/fatality, the team leader will notify spouse(s)/family(ies). Call Ashley Fehringer to get employees phone number and contact name. Phone number below.
- ☐ If the injury/fatality is a subcontractor's employee, it is the sub's responsibility to notify the spouse/family.
- ☐ If someone unrelated to the project is hurt or killed, the authorities will make the notification to their family.

Completed	Agency	Contact Name	Phone Number
☐	Anchor Insurance	Pat Dooney	503.753.5316
☐	Travelers Agent	Jeff Smith	860.462.6540
☐	P&C Office	Ashley Fehringer	Office: 503.665.0165 Cell: 503.679.8795

Crisis Management Plan – Safety Program Administrator

INCIDENT RESPONSE CHECKLISTS

Safety Program Administrator: (Check items when completed)

Primary: Rick McMurry & Dave Van Vleck (When P&C)

- ☐ Facilitate the gather number/names of injured and/or fatalities and obtain phone number(s) of the spouse(s)/family(ies).
- ☐ Obtain witness statements.
- ☐ Contact OSHA within eight hours for a fatality and/or three or more workers requiring hospitalization. OSHA 503-229-5910
- ☐ Document the incident in writing and on film.
- ☐ If an MHA employee is injured, contact AGC, Chris Miller 503-704-7636
- ☐ Hire an outside expert to partner with to conduct a full investigation.
- ☐ Collect all the following documents immediately:
  - ☐ Site Specific Safety Plan
  - ☐ Subcontractor Pre-Con meeting notes
  - ☐ Safety Meeting Minutes
  - ☐ Pertinent Pre-Task Plans
  - ☐ Site Safety Audits
  - ☐ Pertinent Safety Enforcement Actions
  - ☐ Site Photos
  - ☐ Conduct post-accident debriefing
- ☐ Provide psychological and counseling resources to staff.
- ☐ Facilitate Travelers representative's arrival.

Crisis Management Plan – For ALL Employees

Emergency Instructions for ALL Employees

Fire

All employees should:

1. Close windows and leave doors opened and unlocked
2. Evacuate** the building in accordance with the emergency evacuation plan for the area in which you are located at the time of the alarm
3. Proceed to primary staging area (TBD at each location)
4. Standby for further instructions

If you discover a fire or smoke:

1. Sound the building alarm
2. Call 911
3. Follow instructions for all employees

Severe Weather

All employees should:

1. Prepare to move to a place of safety
2. Stay away from large windows
3. Standby for further instructions

** In case of evacuation no beverages, food or bulky items are to be carried into the stairwells

Earthquake

All employees should:

1. Take cover under table, desk, or in doorway
2. Do not run outdoors

Eco Terrorism

All employees should:

1. Attend to victims
2. Call 911
3. Proceed to Primary staging area

Active Shooter

All employees should:

1. **Evacuate**
   a. If there is an accessible escape path, attempt to evacuate the premises
   b. Have an escape route in mind
   c. Evacuate regardless of whether others agree to do so
   d. Leave your belongings
   e. Help others escape
   f. Prevent others from entry shooter's area
   g. Call 911 when safe
2. **Hide if evacuation is not possible**
   a. Find a spot that is out of the shooter's view
   b. Put barriers between you and the shooter
   c. Locked doors
   d. Blockade the door
   e. Silence your cell phone
   f. Turn off any other noise sources
   g. Hide behind desks
   h. Call 911. If you can't speak without revealing your location, leave your phone on
3. **Fight. As a last resort, and only when your life is in imminent danger**
   a. Attempt to disrupt and/or incapacitate the active shooter
   b. Acting as aggressively as possible against him/her
   c. Throwing items
   d. Improvising weapons
   e. Using a firearm if you are trained to do so

Bomb Threat

All employees should:

1. If directed - search immediate area for suspicious object (voluntary basis only)
    a. If package found- do not touch
    b. Evacuate immediately!
    c. Call Bomb Squad –911*
    d. Evacuate area.
2. If evacuation** of the building is required, follow the evacuation plan
3. Proceed to primary staging area

If you receive a bomb threat:

1. Record information on FBI Data Sheet
2. Call 911*
3. Follow instructions for all employees

Chemical or Biological Threat

All other employees should:

1. Stay away from the suspected area and from anyone potentially exposed
2. If an evacuation is ordered, follow normal evacuation procedures while separating those exposed

If you receive a suspicious package/item containing a powdery substance, has strange odors, stains or leaks:

1. Notify supervisor
2. Call 911
3. Do not handle
4. Isolate the package and cordon off the area closing all doors leading to the area
5. If you handled the item, wash exposed skin areas for at least three minutes with soap and water and rinse for one minute
6. Avoid coworkers. Go to staging area but stay away from others to protect them
7. Wait for Hazmat team for possible decontamination procedure

BOMB THREAT CALL PROCEDURES

Most bomb threats are received by phone. Bomb threats are serious until proven otherwise. Act quickly, but remain calm and obtain information with the checklist.

If a bomb threat is received by phone:

1. Remain calm. Keep the caller on the line for as long as possible. DO NOT HANG UP, even if the caller does.
2. Listen carefully. Be polite and show interest.
3. Try to keep the caller talking to learn more information.
4. If possible, write a note to a colleague to call the authorities or, as soon as the caller hangs up, immediately notify them yourself.
5. If you phone has a display, copy the number and/or letters on the window display.
6. Complete the Bomb Threat Checklist immediately. Write down as much detail as you can remember. Try to get exact words.
7. Immediately upon termination of the call, do not have up, but from a different phone, contact Federal Protective Service immediately with information and await instructions.

If a bomb threat is received by handwritten note:
Call _____
Handle not as minimally as possible.

If a bomb threat is received by email:
Call _____
Do not delete the message.

Signs of a suspicious package:

- No return address
- Excessive postage
- Stains
- Strange odor
- Strange sounds
- Unexpected delivery
- Poorly handwritten
- Misspelled words
- Incorrect titles
- Foreign postage
- Restrictive notes

DO NOT:

- Use two-way radios or cellular phone; radio signals have the potential to detonate a bomb.
- Evacuate the building until police arrive and evaluate the threat.
- Activate the fire alarm.
- Touch or move a suspicious package.

WHO TO CONTACT (select one)

- Follow your local guidelines
- Federal Protective Service Police
- 911

BOMB THREAT CHECKLIST

Date: ____/____/_____ Time: _____ AM / PM

Time Caller Hung Up: _____ AM / PM

Phone number where call received: (____) _____ - _____

Ask Caller:

Where is the bomb located? (Building, Floor, Room, etc.)
_____

When will it go off? _____

What does it look like? _____

What kind of bomb is it? _____

What will make it explode? _____

Did you place the bomb? ☐ Yes ☐ No

Why? _____

What is your name? _____

Exact Words of Threat:

_____

_____

_____

Information About Caller:

Where is the caller located? (Background and level of noise)
_____

Estimated age: _____

Is voice familiar? If so, who does it sound like? _____

Other points: _____

CALLER'S VOICE

☐ Accent
☐ Angry
☐ Calm
☐ Clearing throat
☐ Coughing
☐ Cracking voice
☐ Crying
☐ Deep
☐ Deep breathing
☐ Disguised
☐ Distinct
☐ Excited
☐ Female
☐ Laughter
☐ Lisp
☐ Loud
☐ Male
☐ Nasal
☐ Normal
☐ Ragged
☐ Rapid
☐ Raspy
☐ Slow
☐ Slurred
☐ Soft
☐ Stutter

BACKGROUND SOUNDS

☐ Animal Noises
☐ House Noises
☐ Kitchen Noises
☐ Street Noises
☐ Booth
☐ PA System
☐ Conversation
☐ Music
☐ Motor
☐ Clear
☐ Static
☐ Factory Machinery
☐ Local
☐ Long Distance

THREAT LANGUAGE

☐ Incoherent
☐ Message read
☐ Taped
☐ Irrational
☐ Profane
☐ Well-spoken

Other information:

INCLEMENT WEATHER

Inclement Weather

When hazardous weather, be it high winds, abnormally heavy rainfall, snow or freezing temperatures, the following procedures must be followed.

Superintendents and foremen are responsible for being proactive in protecting our workforce from weather related hazards.

1. Responsibilities

1.1. **Superintendent**

1.1.1. The Superintendent is ultimately responsible for the making the decision to delay the start of work or close the job due to weather related concerns.

1.2. **Foremen**

1.2.1. Aid the Superintendent in checking the site conditions in order to make weather related decisions.

1.3. **Chief Safety Officer**

1.3.1. Advise Superintendents as needed on risk assessment and safety concerns.

1.4. **Company Executive or General Superintendent**

1.4.1. Advise Super on work stoppage decisions due to weather.

2. S.O.P.

2.1. **Forecasting**

2.1.1. Use available weather forecasting tools to proactively plan work safety.

2.2. **Assessment of Risk**

2.2.1. Use the weather-related tools and actual on the ground assessment to determine the risk to workers for all work surfaces including egress.

3. Rules

3.1. The superintendent is required to communicate and enforce all shut down decision as the controlling employer.

3.2. Risk is always more expensive than anticipated. Error on the side of caution.

3.3. Shut the job down, the earlier the better. Remember, be proactive and avoid unnecessary risk.

EMPLOYEE SAFETY ONBOARDING

Employee Safety Onboarding

1. **All new employees will receive a half day safety orientation consisting of the following elements:**
    - Company commitment to safety
    - General safety requirements and specific for company
    - Roles and responsibilities
    - Safety committee
    - Employer and supervisor duties
    - Employee duties
    - Discipline policy
    - Drug and alcohol policy
    - Return to work
    - Sexual harassment policy
    - Workplace violence policy
    - Accident reporting and accident investigation procedures
    - Bloodborne pathogen awareness
    - Confined space identification and required processes
    - Electrical
    - Excavation safety
    - Ladder safety
    - Lockout/Tag Out
    - Fall protection
    - Fire safety
    - Hazard communication/globally harmonized system of classification and labeling of chemicals (GHS)
    - Safety meetings
    - Back injury protection/personal work habits
    - All other considerations such as fall protection, aerial lifts, forklifts, scaffolding, confined space, and lockout/tagout may be included.
2. **Safe Work Rules**
    - 2.1. Report to work in good physical and alert mental condition.
    - 2.2. Wear the proper clothing for your job, including a shirt, work shoes, and long pants.
    - 2.3. The use or possession of intoxicating beverages or drugs on the job is prohibited. Reporting to work under the influence of alcohol or drugs is prohibited. The use of certain prescription drugs may impair your performance on the job; please notify your supervisor when using prescription medications.
    - 2.4. Obey all special rules and instructions, caution or warning signs, and traffic laws.
    - 2.5. Understand your work assignment and make certain you are fully qualified for the job.
    - 2.6. Possession of firearms or weapons on company property or while in the care and control of the company is prohibited.
    - 2.7. Look for hazards, unsafe conditions, or practices, and report them immediately to your supervisor unless you can safely correct the condition and then report.
    - 2.8. Learn and follow the specific safety regulations which apply to your job. If you don't know or understand the regulations that apply to your job, ask your supervisor.
    - 2.9. Use the safety equipment and devices provided for your protection.
    - 2.10. Only operate and/or repair machinery, equipment, or electrical circuits if you are qualified and authorized to do so.

2.11. Never enter any confined space such as a manhole, underground vault, tank, pipes, mixer drum, etc. unless you are qualified and authorized, and without first determining if there is adequate ventilation and that there are no flammable or toxic gases. Enter only with proper safety devices, such as a lifeline, and only with another person standing by to help if necessary.

2.12. When lifting heavy or awkward objects, get help or use mechanical lifts available. If you must lift the object yourself, squat or kneel to lift the load. Use your leg muscles and keep the load close to your body.

2.13. Keep work areas clean and free of debris and other hazards.

2.14. Know where emergency equipment is located, such as fire extinguishers, first aid supplies, lifesaving equipment, etc. Report the use of any emergency equipment so it can be replaced.

2.15. Report injuries to your supervisor immediately and obtain first aid or authorized medical treatment. If no treatment is required, the incident must be reported so an action plan can be developed to prevent future injuries.

2.16. Disregard of safe work practices, any of these rules, or other safety instruction could be cause for termination of employment.

2.17. If the object is too heavy, ask for help.

2.18. Firmly grasp the object you are lifting and keep the object close to your body.

2.19. Lift with your legs. Do not lift with your back.

2.20. When turning move your feet. Do not twist your back.

2.21. Make sure your path of travel is free of obstructions.

3. Housekeeping

3.1. Keep work areas, ramps, platforms, access roads, or paths clear of debris, which creates tripping and fire hazards.

3.2. Scrap or debris shall not be permitted to accumulate to such a degree that it endangers health or causes a safety and/or health hazard.

3.3. Materials should be stacked and stored away from foot traffic.

3.4. Keep stairway and ladder access ways clear of debris.

3.5. All flammable liquids must be stored in an appropriate approved safety can.

3.6. Clean up any spilled fuel or flammable liquids.

3.7. Keep tools and materials in proper containers.

DAILY WORKER SIGN-OUT

Daily Worker Sign-Out

1. **Responsibilities**
    1.1. **Superintendent/Foreman**
        1.1.1. The Superintendent or Foremen (depending on job size) is responsible for requiring and confirming that all self-perform workers sign out at the end of each shift.
    1.2. **Employee**
        1.2.1. Every employee as a condition of employment, is required to sign out attesting to the fact that they were not injured on the job that day.
2. **S.O.P**
    2.1. **Sign Out Process**
        2.1.1. Super or Foremen prints out (or uses editable PDF) form for use.
        2.1.2. Employees meet at the end of each day to collect sign-outs.
        2.1.3. Employees signify that were or were not injured that day.
        2.1.4. Super/Foreman uploads the form at the end of the week.

ASBESTOS MANAGEMENT

Asbestos Management

To prevent asbestos hazards and exposures, this program and its attachments provide the procedures and control measures that the company will use to protect employees.

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Will act as the program administrator, and will maintain all air sampling data, records of employees approved to wear respirators (see Respiratory Protection Program) and will maintain this company asbestos policy.

1.2. Project Manager

1.2.1. The Project Manager is required to collect the owner's version of the asbestos and lead report prior to bidding.

1.2.2. PM to supply the report to the safety program administrator

2. S.O.P.

2.1. It is our policy that employees do not handle, disturb, touch, or work with any products known to contain asbestos. This program is to be enforced even if the product/materials contain less than 1% asbestos containing materials (ACM).

2.2. Buildings built before 1985 may contain asbestos building products. Before bidding and starting work on a new project, a building survey for asbestos will be performed. This survey will be conducted by a licensed Asbestos Hazard Emergency Response Act (AHERA) building inspector.

2.3. This building survey will be made available to all employees, tenants, and subcontractors on the jobsite for their review. A copy of this report will be kept at the jobsite, and training will be performed to ensure employees are aware of any asbestos onsite.

2.4. If, after reviewing the asbestos building report, a questionable product or area is not specifically identified (by the building survey) as asbestos containing, do not disturb the material. Immediately contact a jobsite superintendent.

2.5. It is our policy that employees do not handle, disturb, touch, or work with any products known to contain asbestos. This program is to be enforced even if the product/materials contain less than 1% asbestos containing materials (ACM).

2.6. The jobsite superintendent will determine if this product is asbestos-containing by having a qualified asbestos building inspector perform sampling of the material products. If this material is found to contain asbestos, the building owner will be notified within 24 hours.

3. Exceptions to Procedures

3.1. Before any additional tasks can be performed with building products that may contact asbestos, they must be reviewed by the site superintendent or the safety program administrator.

3.1.1. There are certain activities which we have found can be conducted without disturbing the matrix of the contained asbestos, and do not produce hazardous atmospheres, which can cause harm to employees and others.

3.1.2. Before any of the tasks listed on Table 1 are performed, employees must:

3.1.2.1. Complete the mandatory training in asbestos hazards (either Class IV, Class III, or Class II Asbestos Training).

3.1.2.2. Mark the work area with caution tape or post signs indicating the type of work, type of equipment, date and time of work activities, hazards, and type of PPE required in the area.

3.1.2.3. Review the previous air monitoring results for the specific type of work, engineering controls, etc.

3.1.2.4. Determine location and type of hygiene facilities available and review hygiene requirements.

Table 1 – Asbestos Work

Respiratory and Engineering Requirements for Employees

Activity	Duration	PPE Required*	Engineering Controls	Type of Training	Air Sampling Available?
EXAMPLES ONLY					
Stripping electrical wire (<8% asbestos containing)	<1 minute	½ face tight fitting w/HEPA filter	Minimize dust, clean up debris	Class III	Yes
Touching asbestos containing electrical wire	>8 hours	Gloves	Minimize dust, clean up debris	Class IV	Yes

Employees who are wearing respirators must be entered and approved into our company respiratory protection program.

3.1.3. For Jobs Not Listed Above

Before any additional tasks which may cause asbestos exposure can be performed (of those not listed above), a review and evaluation by the safety director and air monitoring must be performed.

4. Training

All employees working on projects and jobsites will have annual training conducted for asbestos awareness. In this class we will cover:

4.1. Information regarding asbestos use and forms.

4.2. Information on health effects associated with asbestos exposure.

4.3. Locations of asbestos-containing building materials on the jobsite.

4.4. Recognition of damage, deterioration, and delamination of asbestos material.

4.5. Name and telephone number of person in charge of management plan, as well as access to management plan.

5. Administrator

5.1. The safety program administrator will act as the program administrator, and will maintain all air sampling data, records of employees approved to wear respirators (see Respiratory Protection Program) and will maintain this company asbestos policy.

AERIAL LIFT EQUIPMENT

Aerial Lift Equipment

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Develop specific policies and procedures pertaining to the operation and maintenance of aerial/scissor lifts.

1.1.2. Implement a training program based on the general principles of safe operation.

1.1.3. Coordinate the training and performance testing of aerial/scissor lift operators.

1.1.4. Maintain the training certification records and performance tests of employees included in the training sessions.

1.1.5. Review the effectiveness of the program.

1.2. Supervisors

1.2.1. Ensure that employees who operate aerial/scissor lifts at their jobsites have received appropriate training.

1.2.2. Provide observations and feedback to operators to ensure safe equipment operation.

1.2.3. Ensure that the lifts under their responsibility are properly inspected and maintained in a safe operating condition.

1.2.4. Provide program feedback to the safety program administrator.

1.3. Operators

1.3.1. Operate the lifts for which they have been specifically trained and authorized.

1.3.2. Operate all lifts in a safe manner and utilize safe work practices.

1.3.3. Inspect the aerial/scissor lifts at the beginning of day or prior to each work shift and utilize the Aerial/Scissor Lift Inspection Form.

1.3.4. Report all equipment malfunctions and/or maintenance needs to their supervisors immediately.

1.3.5. Wear appropriate personal protective equipment when operating aerial/scissor lifts.

1.3.6. Notify supervisor of conditions that would impair the ability to safely operate the aerial/scissor lift.

2. S.O.P.

2.1. Operators will review and follow the manufacturer's operating manual. A copy of the manual must be located on the equipment. Do not operate equipment if operating manual is missing.

2.2. Only certified operators are authorized to operate aerial/scissor lifts.

2.3. Operators will follow safe work practices.

2.3.1. General Safe Work Practices

2.3.1.1. Operators will not wear any loose clothing that may get caught in moving parts.

2.3.1.2. Prior to starting the lift, the operator will complete a walk around inspection, the lift to ensure everyone and everything is clear of the machine.

2.3.1.3. Articulating boom platforms designed as personnel carriers will have both platform (upper) and lower controls. Upper controls will be in or beside the

platform within easy reach of the operator. Lower controls are provided for overriding the upper controls. The controls' function will be plainly marked. Lower level controls will not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

2.3.1.4. Modifications and additions that may affect the capacity or safe operation of an aerial/scissor lift are strictly prohibited without the manufacturer's written approval.

2.3.1.5. Any signs, plates, or decals that are missing or illegible must be replaced prior to operation.

2.3.1.6. Welding operations on aerial/scissor lifts will be conducted as per the company's Hot Work Program.

2.3.1.7. A disabled aerial/scissor lift will be tagged with an "Out of Service" tag or equivalent attached to the controls inside the platform in a conspicuous location.

2.3.1.8. Out of service aerial/scissor lifts will not be operated until repairs are made and equipment is authorized for use.

2.3.2. **Prior to Operation**

2.3.2.1. Follow the manufacturer's recommendations regarding operation in windy conditions.

2.3.2.2. Guardrails will be installed, and access gates and/or openings will be closed prior to raising the platform or moving the lift.

2.3.2.3. Do not be exceeded boom and platform load limits specified by the manufacturer.

2.3.2.4. Before moving an aerial/scissor lift for travel, the boom(s) will be inspected to ensure it is properly cradled and outriggers are in stowed position.

2.3.2.5. Protect the general public by use of barricades, guardrails, or personnel.

2.3.3. **Safe Work Practices During Operation**

2.3.3.1. Attention will be given during travel to clearances above, below, and on all sides of the lift.

2.3.3.2. Employees will not sit or stand on the guardrails or toe boards of the aerial/scissor lift.

2.3.3.3. Planks, ladders, or other devices will **not be used** on the work platform to gain access to higher levels.

2.3.3.4. Aerial/scissor lift will not be moved (travel) when the boom is elevated and in working position with employees in the basket, except when the equipment is specifically designed for that type of operation.

2.3.3.5. Aerial/scissor lift shall never be placed against another object to steady the elevated platform.

2.3.3.6. Aerial/scissor lift will not be used as a crane or lifting device.

2.3.3.7. Never tie or physically attach cords, hoses or any other items to the lift.

2.3.3.8. Aerial/scissor lift devices will not be operated on grades, side slopes, or ramps that exceed the manufacturer's recommendations.

2.3.3.9. The brakes will be set and outriggers, when used, will be positioned on pads or a solid surface.

2.3.3.10. Speed of aerial/scissor lift devices will be limited according to the conditions of the ground surface, congestion, visibility, slope, location of personnel, and work performed, and other factors that may cause hazards to nearby personnel.

2.3.3.11. Horseplay is not permitted.

2.3.3.12. Ensure the area surrounding the elevated platform is cleared of personnel and equipment prior to lowering the elevated platform.

2.3.3.13. On boom-type machines, the swing and boom functions will be used for maneuvering to get close to an obstacle. Do not be use drive controls to maneuver in this situation.

2.3.3.14. Operators are to call for assistance if the platform or any part of the lift becomes entangled.

2.3.3.15. The operator will maintain a clear view of the path of travel and a safe distance from obstacles such as debris, drop offs, holes, depressions, slopes, and overhead hazards.

3. Inspections

3.1. An inspection will be completed on the aerial/scissor lift prior to use on each shift use the provided form.

3.2. Operators will immediately notify the supervisor of unsafe aerial/scissor lift conditions so necessary arrangements may be made for repair.

4. Battery Charging, Filling, and Fueling

4.1. **Charging Batteries** – plug into 110v power provided on site via a GFCI circuit.

4.2. **Fueling**

4.2.1. Liquid petroleum (LP) cylinders will be stored outside in a secured and protected designated rack or storage area.

4.2.2. Utilize safety glasses and leather work gloves when removing and attaching the connection to the LP cylinder.

4.2.3. LP cylinders will be secured to the lift before operating.

4.2.4. LP cylinder connections will be checked for leaks by the sound or smell of escaping gas.

5. Personal Protective Equipment

5.1. **Aerial Lifts:** Operators will be secured 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; fall restraint will be utilized.

5.2. **Scissor lift**

5.2.1. The guardrail system provides fall protection.

5.2.2. Do not tie lanyards off to a scissor lift unless permitted by the manufacturer's specifications.

5.2.3. Tying a lanyard off to an adjacent pole, structure, or equipment while working from a lift is not be permitted.

Aerial Lift Equipment

6. Training

6.1. Training will be completed prior to use of the aerial/scissor lift.

6.2. Classroom instruction, training, and hands-on evaluation may be conducted by a competent trainer, equipment manufacturer, safety consultant, and/or a vendor with aerial/scissor lift expertise.

Training and hands-on evaluation portions of the training can also be conducted by an employee experienced and competent with the aerial/scissor lift. This person may be a certified operator, supervisor/manager/foreman, or the safety program administrator.

6.3. Training will be specific to the type of aerial/scissor lift being used.

6.4. Training will cover the following:

6.4.1. Equipment manuals

6.4.2. Operating manuals properly stored on the vehicle

6.4.3. Inspections

6.4.4. Factors affecting stability

6.4.5. Placards and decals

6.4.6. Workplace hazard assessments

6.4.7. Safety rules and regulations

6.4.8. Operator warnings and instructions

6.4.9. Personal fall protection equipment

6.4.10. Hands-on operation

6.5. Refresher training in relevant topics will be provided to an aerial/scissor lift operator when any of the following occurs:

6.5.1. The operator is observed using the aerial/scissor lift in an unsafe manner.

6.5.2. The operator is involved in an accident or a near-miss incident.

6.5.3. The operator is assigned to operate a different type of equipment.

6.5.4. Workplace tasks change.

7. Maintenance: Maintenance of aerial/scissor lift will be performed others.

8. Recordkeeping

8.1. Operators will have a training record with the following:

8.1.1. Name of operator

8.1.2. Date of classroom training

8.1.3. Date of hands-on training

8.1.4. Date of hands-on evaluation

8.1.5. Identity of the person(s) performing the training and/or evaluation

8.1.6. Make and model of aerial/scissor lift

8.2. Training records will be kept in the safety program administrator's office.

BLOODBORNE PATHOGENS

Bloodborne Pathogens

The company has developed a bloodborne pathogen program to enhance our employees' health and safety.

Bloodborne pathogens are microorganisms that can cause disease when transmitted from an infected individual to another individual through blood and certain body fluids. Bloodborne pathogens are capable of causing serious illness and death. The most common illnesses caused by bloodborne pathogens are:

- Hepatitis B (HBV),
- Hepatitis C (HCV), and
- Acquired immunodeficiency syndrome (AIDS) from HIV, or human immunodeficiency virus.

We do not anticipate employees routinely being occupationally exposed to these hazards.

1. Collateral Duty Clause

1.1. Good Samaritan acts are not covered under the bloodborne pathogen standard, but it is our policy to provide evaluation and treatment of employees who sustain exposure to blood or other potentially infected materials while voluntarily assisting an injured employee until professional care arrives.

1.2. If you are exposed to blood or other potentially infectious materials, or when these hazards are identified, contact the Safety Program Administrator.

1.3. Each project manager and/or project supervisor will ensure that each employee under their supervision meets or exceeds the protective measures included in this program.

2. Exposure Control Plan

2.1. An exposure incident to bloodborne pathogens is defined as an eye, mouth, other mucous membrane; non-intact skin; or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties. It is our policy to include Good Samaritan acts performed by an employee at the work site.

2.2. If you are exposed to blood or other potentially infectious materials, follow these procedures:

2.2.1. Wash the contaminated skin immediately with soap and water.

2.2.2. Immediately flush contaminated eyes or biohazard mucous membranes with copious amounts of water.

2.2.3. Medically evaluate exposed employees as soon as possible after the exposure incident so post-exposure prophylaxis, if recommended, can be initiated promptly.

2.2.4. Report the incident to your superintendent before the end of the work shift, and include:

2.2.4.1. Names of all involved.

2.2.4.2. Date and time.

2.2.4.3. How the incident occurred.

2.2.5. An exposure report will be performed by the Safety Program Administrator and will be available to all employees (and OSHA, upon request).

Bloodborne Pathogens

3. Employees at Risk

3.1. We do not anticipate employees routinely being occupationally exposed to these hazards. However, below are the employees at risk and the task or procedure that may cause contact with bloodborne pathogens.

3.2. If employees are routinely exposed to bloodborne pathogens or other potentially infected materials, a full bloodborne pathogens exposure control program will be provided, and further training will be given.

3.3. If you are performing a task where you may have a reasonable chance to contact a blood borne pathogen, please contact the Safety Program Administrator. Clean up activities of blood borne pathogens are site specific and will be developed prior to contact.

Job Classification	Task or Procedure

3.4. These jobs and tasks will be maintained on file by the Safety Program Administrator.

4. Training

4.1. Training will be conducted prior to employees performing these tasks, or before any anticipated exposure to bloodborne pathogens.

5. Universal Precautions

5.1. Universal precautions are an approach to infection control in which all human blood and other potentially infectious materials are handled as if they were known to be infectious for bloodborne pathogens. Consider difficult- or impossible-to-identify body fluids as potentially infectious.

5.2. Any task which may put an employee in contact with bloodborne pathogens should use the following procedures:

5.2.1. Clean up blood spills or body fluids as soon as possible.

5.2.2. Use disposable absorptive materials, such as paper towels or gauze pads, to soak up the fluids.

5.2.3. Clean the area with chemical germicides or a 1:10 solution of liquid bleach.

5.2.4. Place absorptive towels, pads, and other material used to mop up spills in plastic bags or designated, labeled containers and treat as biohazardous waste.

5.2.5. Employees must wash their hands upon removal of gloves and other protective gear. In an emergency, if soap and water are not immediately available, use disposable antiseptic towelettes or germicidal gels to clean hands after removing gloves.

5.2.6. Employees must wash their hands with soap and water as soon as possible.

Bloodborne Pathogens

6. Statement of Declination

6.1. If you have exposure (as defined by OSHA 1910.1030) to bloodborne pathogens you will be offered treatment within 24 hours. You may choose to decline post-exposure treatment of bloodborne pathogens. If you do, you must fill out the statement of declination form.

6.2. The following statement must be signed by every employee who declines the hepatitis vaccine. The statement can only be signed by the employee after he or she has received training about hepatitis B, hepatitis B vaccination, and the method and benefits of vaccination. Employees must be told that the vaccine and vaccination are provided at no charge. The statement is not a waiver; employees can request and receive the hepatitis B vaccination at a later date if they remain occupationally at risk for hepatitis B.

Employee's Statement of Declination

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

_____ _____

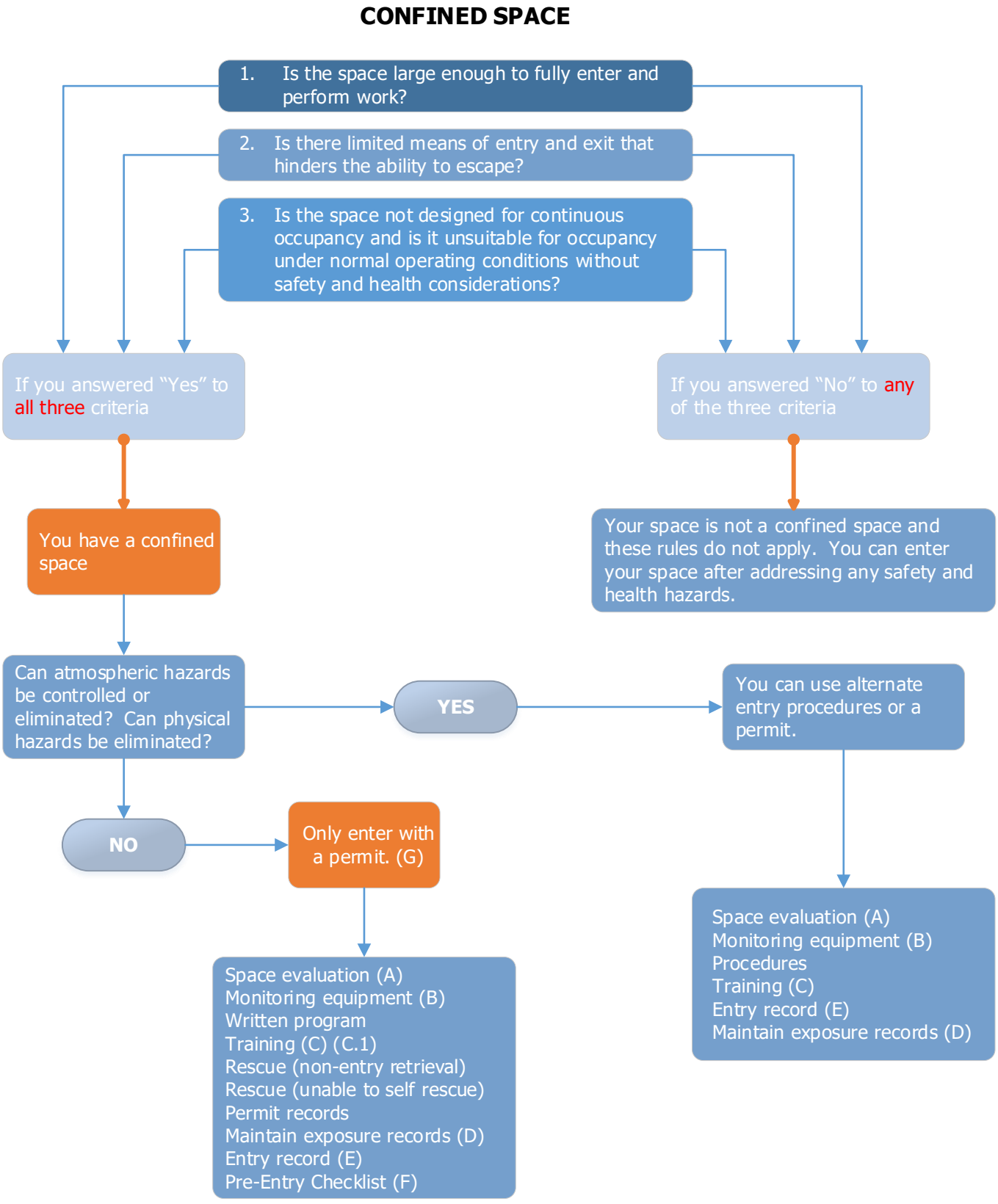
Employee Name (printed) Date

_____

Employee Signature

CONFINED SPACE PROGRAM

Confined Space Program



Confined Space Program

1. Space Determination

This document delineates the requirements for entry into non-permit, permit-required, and alternate entry spaces.

2. Responsibilities

2.1. **Superintendent:** The Superintendent is responsible to review all subcontractor confined space programs prior to work commencing.

2.2. **Foreman:** The General Foreman is responsible to assure that all subcontractor confined space work is done in compliance with OSHA standard.

3. Confined Space

3.1. A confined space shall meet all the following criteria:

3.1.1. The space is large enough and configured so that an employee can bodily enter and do work.

3.1.2. The space has limited or restricted means of entry or exit.

3.1.3. The space is not designed for continuous employee occupancy.

3.2. A non-permit-required confined space does not have a hazardous or the potential for a hazardous atmosphere that could cause death or serious physical harm.

3.3. A confined space can be entered using alternate entry procedures if the employer can demonstrate that:

3.3.1. The only hazard posed by the permit space is an actual or potentially hazardous atmosphere.

3.3.2. Forced air ventilation alone will maintain the permit space for entry.

3.3.3. Monitoring and inspection data are available to employees.

4. Definitions

4.1. **Attendant**: an individual stationed outside a regulated space who is trained to the same level as an authorized entrant and who monitors the entrants inside the regulated space.

4.2. **Alternate Entry**: An alternative process for entering a permit space under very specific conditions. The space remains a permit space even when entered using alternate entry and even though no entry permit is required in those circumstances.

4.3. **Confined Space:** any space which is:

4.3.1. Large enough and so configured that an employee can bodily enter and perform work,

4.3.2. Has limited or restricted means of entry or exit, and

4.3.3. Is not designated for continuous employee occupancy.

4.4. **Alternate Entry:** Confined spaces where the only hazard is atmospheric, and con be controlled by ventilation alone. They can only be made safe for entry if the employer:

4.4.1. Demonstrates that the only hazard posed by the permit space is an actual or potentially hazardous atmosphere.

4.4.2. Demonstrates that forced air ventilation alone will maintain the permit space safe for entry.

4.4.3. Develops monitoring and inspection data to support (1) and (2) above and makes the supporting data available to employees.

4.4.4. Performs the initial entry to obtain data and subsequent periodic testing to ensure that the ventilation is preventing the build-up of a hazardous atmosphere.

4.5. Permit-Required: confined space which:

4.5.1. Contains or has the potential to develop a hazardous atmosphere.

4.5.2. Contains a material with a potential for engulfment.

4.5.3. Has a configuration such that an entrant could be trapped or asphyxiated.

4.5.4. Contains any other recognized serious safety or health hazard(s).

4.6. **Emergency Contact:** An individual or position listed on the confined space entry permit that is available, for the duration of the confined space work, to activate emergency rescue response.

4.7. **Enclosed Space:** A working space, such as a manhole, vault, tunnel, or shaft, that has limited means of entry or egress, that is designed for periodic employee entry under normal operating conditions, and that under nor conditions does not contain a hazardous atmosphere, but may contain a hazardous atmosphere under abnormal conditions. The space shall be an electrical power generation, transmission, or distribution installation.

Note: Spaces that are enclosed but not designed for employee entry under normal operating conditions are not considered to be enclosed spaces for the purpose of this program. Similarly, spaces that are enclosed and that are expected to contain a hazardous atmosphere are not considered to be enclosed spaces for the purpose of this program. Such spaces meet the definition of a permit-required confined space as listed under 29 CFR 1910.146 and 1910.269 (e), and entry into them must be performed in accordance with this standard.

If, after the precautions for enclosed space entry are taken, the hazards remaining in the enclosed space endanger the life of the entrant or could interfere with escape from the space, then entry into the enclosed space shall meet the permit space entry requirements of 1910.146 (d) through (k).

4.8. **Entrant:** An individual who has received written authorization through an entry permit, signed by an entry supervisor, to enter a confined space.

4.9. **Entry:** Occurs as soon as any part of the entrant's body breaks the plane of an opening into the confined space.

4.10. **Entry Permit (CSE):** The written or printed document provided by the employer to allow and control entry into a permit space; contains the information specified in the "General Requirements" of OR-OSHA 437 1910.146 (5)(I) and (5) (ii) "Permit-required" confined spaces.

4.11. **Entry Supervisor:** The person (such as an employer, foreman, or lead person) responsible for determining if acceptable conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating operations as required by this program.

4.12. **Hazardous Atmosphere:** An atmosphere that exposes employees to risk of death, injury, or illness from a flammable gas in excess of 10 percent of its lower explosive limit; an atmospheric oxygen content below 19.5 percent or above 23.5 percent; an atmosphere containing toxic gases; or any other atmospheric condition recognized as being dangerous to life and health.

4.13. **Hot Work:** Any operation that could provide a source of ignition, such as riveting, welding, cutting, burning, or heating.

4.14. **Immediate Danger to Life or Health (IDLH):** Any atmospheric concentration from which one could not escape within 20 minutes without a respirator and without experiencing escape

impairing (e.g. severe eye irritation) or irreversible health effects (NIOSH definition).

4.15. **Lower Explosive Limit (LEL):** The minimum concentration of a combustible gas or vapor in air that will ignite if an ignition source is present.

4.16. **Regulated Space:** Any enclosed, confined, or permit-required confined space.

4.17. **Retrieval Line:** A line or rope secured to a worker at one end by a full body harness, with its other end secured to either a lifting device or to an anchor point outside the confined space.

4.18. **Self-Rescue**: The ability of the entrant to remove themselves from the confined space under their own power.

4.19. **Short Duration Entry:** Entry into an enclosed space for a period of time of 10 minutes or less.

4.20. **Standard Duration Entry:** Entry into an enclosed space for a period of time in excess of 10 minutes.

5. Permit-Required Confined Space

A confined space is a permit-required confined space if it meets any of the following criteria:

5.1. Contains or has the potential to contain a hazardous atmosphere.

5.2. Contains a material that has the potential for engulfing an entrant (e.g. being trapped in liquid or solid material).

5.3. Is configured so that an entrant could be trapped or asphyxiated by inwardly converging walls or sloping floors.

5.4. Contains any other recognized serious safety or health hazard that can inhibit an entrant's ability to self-evacuate.

6. Alternate Entry of Permit Spaces

The entry supervisor may determine that a permit-required confined space may be entered without a permit when the following conditions can be met:

6.1. All hazards have been eliminated.

6.2. All physical hazards have been eliminated and all atmospheric hazards controlled with continuous forced-air ventilation to maintain a safe atmosphere in the space.

6.3. Monitoring and inspection data support the determination of a safe atmosphere.

7. Roles and Responsibilities

At least two individuals are required to fulfill the various roles and responsibilities for permit- required confined space entry (CSE). The primary roles are the attendant, entrant, and entry supervisor. Either an attendant or entrant may act as the entry supervisor. In addition, a person using an air monitor doubles as an air monitor technician. Finally, the project supervisor (or a designee) has responsibilities before CSE permits or information sheets are issued and after CSE permits or information sheets are cancelled. This section defines each role and their respective responsibilities.

7.1. Attendant

The attendant is an individual stationed outside the permit-required confined or enclosed space who is trained to monitor the authorized entrant(s) inside the regulated space. An attendant must:

7.1.1. Know the hazards within the regulated space and signs of exposure to hazards within the space.

7.1.2. Monitor the entrants' behavior.

7.1.3. Track the number of workers in the space and restrict space access to only authorized entrants.

7.1.4. Maintain constant contact with the entrant(s).

7.1.5. Protect entrant(s) from external hazards.

7.1.6. Remain at the entrance, unless relieved by another authorized attendant.

7.1.7. Capable of instantly contacting the rescue team. The attendant may not enter the space to rescue, however, the attendant may perform non-entry rescue from outside the regulated space.

7.2. **Entrant**

A person becomes an entrant when any part of their body breaks the plane of the permit- required confined or enclosed space. Before entering any regulated space, an entrant must:

7.2.1. Know the hazards within the space and the exposure signs for each hazard.

7.2.2. Demonstrate the use of personal protective equipment (PPE).

7.2.3. Keep in contact with the assigned attendant. If contact is lost with the attendant, the entrant must leave the regulated space.

7.2.4. Alert the attendant to any observed hazard or condition not allowed by the permit.

7.2.5. Instantly obey any order to evacuate the regulated space.

7.2.6. Initial the CSE permit or information sheet to verify it is in place.

7.2.7. Verify that required air sampling has occurred.

7.2.8. Follow all applicable safety rules concerning the specific job.

7.3. **Entry Supervisor**

The entry supervisor is the person responsible for determining if acceptable entry conditions are present in the permit-required confined or enclosed space, authorizing entry, overseeing entry operation, and canceling the entry. The entry supervisor may also be either the attendant or entrant, if trained for that role. The duties of the entry supervisor may be passed from one individual to another during an entry operation. The entry supervisor must:

7.3.1. Know the hazards that may be faced during entry, including information of the mode, signs, symptoms, and consequences of the exposure.

7.3.2. Personally verify, before endorsing the permit and allowing entry, that:

7.3.2.1. Appropriate entries have been made on the permit, and

7.3.2.2. All tests specified by the permit are in place.

7.3.3. Stop the entry and cancel the permit as required.

7.3.4. Verify that:

7.3.4.1. Rescue services are available.

7.3.4.2. Means of summoning rescue services are operable.

7.3.5. Remove unauthorized individuals who enter or attempt to enter the regulated space during any operation.

7.3.6. At permit-specified intervals, and whenever transferring responsibility, determine that:

7.3.6.1. Entry operation remains consistent with the terms of the entry permit, and

7.3.6.2. Acceptable entry conditions are maintained.

7.4. **Responsible Supervisor**

The responsible supervisor must be trained in and may function as an attendant, entrant, or entry supervisor. In addition, the project supervisor (or a designee) has the responsibility to:

7.4.1. Maintain the CSE logbook and keep cancelled permits for at least one year.

7.4.2. Review submitted CSE permit(s) or information sheet(s) for accuracy.

7.4.3. Approve the CSE permit or information sheet before air sampling is done.

7.4.4. Retain the original CSE permit or information sheet and issue copies of the permit based on the number of entry points.

7.4.5. Ensure that the entry supervisor has cancelled the CSE permit or information sheet and turned in all issued copies of the permit.

7.4.6. Conduct a monthly review of the CSE permit or information sheet logbook to ensure that no "in use" permit has expired.

7.5. **Outside Contractors and Their Employees**

7.5.1. The responsible supervisor ensures that outside contractors follow all applicable Oregon-OSHA regulations and coordinates with staff as necessary.

7.5.2. The responsible supervisor must:

7.5.2.1. Inform all contractors that work will be in a permit-required confined or enclosed space.

7.5.2.2. Apprise the contractor of known hazards and experience with the space.

7.5.2.3. Apprise the contractor of any employee protection precautions or procedures used in or near the areas that contractor personnel may be working.

7.5.2.4. Debrief the contractor at the end of the entry operation.

7.5.3. Personnel observing unsafe contractor work practices in or around confined spaces are responsible for informing the responsible supervisor and/or the safety office.

7.5.4. The contractor is responsible for obtaining information, coordinating entry operations with staff, informing staff of the contractor permit program, and informing of any hazards confronted or created in a permit space.

8. S.O.P.

According to OR-OSHA regulations, utilities have three types of spaces: permit-required confined spaces, enclosed spaces, and non-permit confined spaces. A confined and enclosed (CSE) permit is required before personnel may enter permit-required confined or enclosed spaces. An alternate entry may be made under certain conditions. Until atmospheric monitoring data is collected for a space, a CSE permit or information sheet is required for entry. This section contains the procedures for:

- Non-permit confined space entry
- Permit-required confined and enclosed space entry
- Alternate entries
- Emergency exit and rescue entry

8.1. **Non-permit confined space entry**

8.1.1. Non-permit confined spaces do not require a CSE permit and must meet the following criteria:

8.1.2. The actual or potential hazard in the confined space is atmospheric.

8.1.3. Air monitoring records demonstrate that natural ventilation or continuous forced air ventilation will maintain a safe atmosphere.

8.1.4. An entrant will wear a personal atmospheric monitor with audio and visual alarms that activate when levels exceed limits.

8.1.5. Data documenting conditions must be recorded and maintained on a Non-Permit Confined Space information sheet. Note: if any alarm points are reached, the space must be reclassified as a permit-required confined space until the cause of the alarm is determined and eliminated. A change from natural to continuous forced air ventilation may be sufficient.

8.1.6. The monitoring data is available to all confined space entrants.

8.2. **Permit-Required Confined Space Entry (CSE)**

8.2.1. A CSE permit must be completed and authorized before anyone may enter a permit-required confined space. CSE permits must be issued and authorized by signature of the entry supervisor. At a minimum, the work party must include two people: an attendant (who must remain outside the regulated space) and an entrant. The attendant and entrant may share the remaining responsibilities.

8.2.2. The entry supervisor (who may double as an entrant or attendant) fills out the CSE permit, including assigning roles to each individual in the work party.

8.2.3. The nature of the hazards in the confined space will determine the safety equipment necessary for each specific entry. The following should be considered:

8.2.3.1. Fall protection consisting of a full body harness, lanyard, and a 5,000 lb.-rated anchor point is required when an individual is exposed to a height greater than six feet or when working over water or energized equipment. The harness should be attached to a lifeline to facilitate a non-entry rescue unless the lifeline is impractical or would create an additional hazard to the entrants.

8.2.3.2. Protective equipment, including fire resistant clothing, boots, hearing protection, eye protection, hard hats, respiratory protection, or other gear for the entrant and appropriate for the work to be conducted must be provided.

8.2.3.3. Respiratory protection cannot be used as a substitute for mechanical ventilation. If ventilation does not remove the atmospheric hazard, find and eliminate the source of the hazard before entry.

8.2.3.4. A means of communication between the attendant and the entrant(s) and the attendant and the rescue team must be provided, operational, and maintained.

8.2.4. The attendant informs the identified emergency contact of which permit-required confined spaces will be entered and the expected duration of the entry.

8.2.5. The entry supervisor ensures the space has been drained and/or purged. Valves, electrical, and other potential sources of hazardous energy associated with the entry must be accounted for in accordance with the Lockout/Tagout Program.

8.2.6. Test the atmosphere in the confined space to assure the atmosphere is not toxic, explosive, and/or oxygen deficient or enriched; other atmospheric hazards may need to be individually monitored. From top to bottom with a calibrated meter to ensure that the atmospheric parameters are within the limits shown below. First, test the atmosphere at the opening prior to removing entry covers. Remove covers and protect the opening with railings, temporary covers, or other temporary barriers to protect individuals, tools, or equipment from falling into the opening.

8.2.6.1. Carbon monoxide is <35 ppm

8.2.6.2. Hydrogen sulfide <10ppm

8.2.6.3. Lower explosive limit (LEL) < 10%

8.2.6.4. Oxygen is >19.5% and <23.5%

8.2.7. If ventilation does not remove the atmospheric hazard, find and eliminate the source of the hazard before entry.

8.2.8. Entry supervisor shall advise all on-site personnel of the potential hazards. Problems encountered during entry will be noted on the CSE permit.

8.2.9. The entry supervisor shall ensure that all the CSE permit requirements for safe entry are met. If all requirements necessary for safe entry have been met, the entry supervisor may authorize the CSE permit, and post the CSE permit at the entry location. Each additional entry location will require a copy of the CSE permit.

8.2.10. Continuous monitoring will be performed during all entries. Ventilate the space from top to bottom, ensuring the following:

8.2.10.1. If an atmospheric condition triggers a monitor alarm, no entry is permitted until five minutes of forced air ventilation has eliminated any hazardous atmosphere. The air supply will be from a clean source; be aware of potential sources of poor air quality, e.g. vehicle exhaust. This shall be confirmed by retesting the atmosphere.

8.2.10.2. Continue ventilation until all entrants have left the space.

8.2.11. When the atmosphere is hazardous or is in immediate danger of becoming hazardous, only specially trained personnel may enter the space with a self-contained breathing apparatus (SCBA) while wearing a body harness and retrieval line.

8.2.12. Extra protective equipment may be obtained, and a rescue team may be contacted.

8.2.13. Observe entrants for unusual behavior, irrational conduct, or signs of sickness. If personnel exhibit these symptoms, evacuate (self-evacuate) all personnel until the cause is determined (signs and symptoms include headache, tachypnea, nausea, weakness, dizziness, confusion, hallucinations, fatigue, irritated eyes, irritated respiratory system, apnea, lacrimation, photophobia, convulsions, collapse, or coma).

8.2.14. Tools used in the regulated space will be restricted as follows:

8.2.14.1. Electric tools will be properly grounded, or ground fault circuit interrupters (GFCI) will be used in the regulated space.

8.2.14.2. Lighting will be low voltage and either vapor proof or have GFCI protection.

8.2.14.3. Non-sparking tools will be used if the atmosphere contains or may contain a flammable or explosive mixture.

8.2.15. The attendant ensures that entrants comply with all CSE permit entry conditions and records readings at the intervals listed in the CSE permit. If a hazardous atmosphere is detected:

8.2.15.1. Tell entrants to leave the confined space immediately (self-evacuate).

8.2.15.2. Evaluate the space to learn how hazardous atmospheres occurred.

8.2.15.3. Determine measures to protect workers from hazardous atmospheres before reentry.

8.2.16. If an entrant moves through an area where the atmosphere could not be tested before entry, the first entrant will wear a personal monitor. The personal monitor will be operated continuously and will have alarms for the presence of hazardous conditions.

8.2.17. The attendant will ensure that all entrants comply with all CSE permit conditions, including PPE.

8.2.18. Hot work may only be done in a regulated space if it is approved on the CSE permit. Precautions and restrictions for hot work are as follows:

8.2.18.1. Welders will use mechanical ventilation and continuous air monitoring to protect themselves and other personnel in the area from toxic metal fumes.

8.2.18.2. Inert gas welding in a regulated space can create an oxygen deficient atmosphere and therefore requires mechanical ventilation and continuous air monitoring at or near the welder.

8.2.18.3. Hot work personnel do not have to be connected to a lifeline if the lifeline will create a greater work hazard. However, welders should consider wearing a body harness for quick retrieval.

8.2.18.4. Hot work, including welding, cutting, riveting, etc., is restricted in or near regulated spaces that may contain flammable or explosive vapors. Hot work cannot begin until the space has been properly ventilated.

8.2.19. The entry supervisor cancels all permits following work completion or if the permit expires (whichever comes first). Do not close/cancel the CESE permit until all entrants have left the space.

8.2.20. If pre-work notice was provided, notify the identified emergency contact that the confined space work has been completed.

8.2.21. Submit the cancelled CSE permit to the responsible supervisor for record storage.

8.3. **Alternate Entry Procedures**

8.3.1. To determine if a confined space does not require a permit, the entry supervisor will issue an initial entry information sheet to evaluate the space conditions. All data collected showing that the space can safely be entered without a permit must be maintained and available to affected employees. (Note: this means a permit must be completed to show the hazards are eliminated or not present.) The alternate entry must first follow either the procedures listed under 500.910.3(C)1 or 500.910.3(C)2, then follow the procedures under 500.910.3(C)3 and 500.910.3(C)4.

8.3.2. Show, without entry, that the space poses no actual or potential atmospheric hazards, and all hazards within the space are eliminated.

8.3.3. Show, with entry via testing and inspection, that the space poses no actual or potential atmospheric hazards, and all hazards within the space are eliminated. The initial entry must

be made using a CSE information sheet.

8.3.4. The entry supervisor must justify and approve the alternate entry using a CSE information sheet including location and date. The CSE information sheet must be available to each employee entering the space.

8.3.5. If a hazard arises within the declassified space, all personnel must exit the space. The entry supervisor must reevaluate and determine whether the space is a permit-required space. Following review of the space, the appropriate procedures must be followed.

8.4. **Emergency Exit and Rescue Entry**

8.4.1. Self-evacuation is the immediate evacuation of an enclosed, confined, or permit-required confined space by the authorized entrant under his/her own power. Self-evacuation from the regulated space of all entrants is required when any of the following occurs:

8.4.1.1. The attendant orders evacuation.

8.4.1.2. An air monitor alarm is activated.

8.4.1.3. The entrants believe they are in danger.

8.4.2. An emergency rescue is the removal of an entrant who has been injured, fallen unconscious, or who is for any reason is unable to exit the regulated space under their own power. The CSE program is designed to prevent the need for an emergency rescue. However, should the need arise; the Emergency Response Plan limits the exposure to would-be rescuers by requiring that qualified personnel engage in victim removals.

8.4.2.1. A rescue plan is to be designed and reviewed prior to entry. If the rescue plan requires entry rescue, would-be rescuers must be trained on a like space prior to the confined space entry.

8.4.2.2. **Local fire departments are the designated rescue teams depending on the physical location of the rescue and if an agreement has been established. Most fire departments will NOT accept this responsibility.**

8.4.2.3. A non-entry rescue from outside the space may be attempted by the attendant, to remove entrants using a man-rated hoisting device attached to the entrant's retrieval line. Non-entry retrieval should be limited to occasions where immediate removal of the victim is necessary to prevent serious injury or death. Examples include entrants threatened by hazardous atmospheric conditions, an electrical or mechanical hazard, uncontrolled flooding, or an engulfment hazard.

8.4.2.4. The attendant initiates emergency rescue by radio or telephone communication to the emergency contact. The emergency contact shall activate the emergency response (e.g. 9-1-1 or direct call) and report the emergency to the work group supervisor. The entry supervisor or other designee should meet emergency vehicles at the site entrance. The supervisor (or lead worker if a supervisor is not available) shall report to the scene of the emergency to monitor and support rescue crews.

8.4.2.5. If a hazardous atmosphere is present, no one may enter a regulated space to aid entrants without wearing an SCBA. Note: the attendant must remain at his/her station outside the regulated space during normal or rescue work activities, unless relieved by another qualified worker or supervisor.

8.4.2.6. Ensures all rescuers, including non-entry, entry, and third-party, are knowledgeable in basic first aid and cardiopulmonary resuscitation (CPR). At least one member must be certified in first aid and CPR.

8.4.2.7. Rescue with comparable equipment on the type of space being entered must have been practiced in the previous 12 months.

9. Requirements

9.1. **Preventing Unauthorized Entry:** The unauthorized entry into any enclosed, confined, or permit-required confined space is strictly prohibited under any circumstances. Anyone observing unauthorized entry or unsafe work practices in or around regulated spaces should notify affected employees and their supervisor or lead worker.

9.2. **Permit System:** A copy of a CSE permit and a CSE information sheet are attached to this program. The use of the CSE permit form or information sheet is required to authorize entry into any confined or enclosed space.

9.3. **Safety Equipment**

9.3.1. Necessary equipment, including protective and communications equipment, will be readily available for employees to ensure safe entry, safe working conditions, and safe exit of confined spaces. Requests for additional safety equipment for specific work areas should be made through the appropriate supervisor.

9.3.2. Authorized entrants are responsible for ensuring that all protective equipment is in good condition before and after confined space work. Any defective equipment is to be immediately taken out of service and tagged with a warning notice until it is repaired. Supervisors shall be notified when equipment needs repair or replacement.

9.3.3. Atmospheric monitoring equipment shall be calibrated and maintained. The equipment is to be used according to the most current procedures provided by the manufacturer.

9.4. **Protection from External Hazards:** Before entering an enclosed, confined, or permit-required confined space, entrants will place a visible barrier or barricade to alert other employees of the hazard present. Only employees who are properly trained are authorized to enter a regulated space. The individual in charge of the confined space entry is responsible for ensuring that all necessary pedestrian, vehicle, and other barriers are in place to protect entrants from external hazards.

9.5. **Lockout/Tagout:** Before entering the enclosed, confined, or permit-required confined space, lockout/tagout devices must be installed to prevent accidental start-up or energizing of hazards that could affect the safety of the entrant. (See Lockout/Tagout Program.)

9.6. **Contractor Entry:** Any person responsible for overseeing contracted work involving enclosed, confined, or permit-required space entry by the contractor's employees will be responsible for informing the contractor of the potential hazards of entry and of the CSE program provisions, or have the contractor follow their own CSE program. Any person observing unsafe contractor work practices in or around confined or enclosed spaces is responsible for informing their supervisor, safety officer, and manager.

9.7. **Training Competencies**

9.7.1. Attendants, entrants, entry supervisors, and anyone who may authorize entry should receive training in safe work practices for confined spaces and the provisions of this CSE program. Training shall be provided for all new employees, before an employee is assigned permit space duties, before there is a change in an employee's assigned duties, when there is a hazard for which the employee hasn't already been trained, when there are changes to the permit program, when the permit audit shows deficiencies, or whenever there is a deviation from the established procedures.

9.7.2. Retraining should be conducted when an employee's knowledge of the procedures is inadequate. Personnel may not be asked to enter or work in a regulated space until he/she has been trained in the following:

9.7.3. Enclosed and Confined Space Entry Program

9.7.3.1. Demonstrate knowledge in the purpose and procedures contained in this program.

9.7.4. Hazard Recognition

9.7.4.1. Demonstrate the ability to describe the types of hazards that may be faced during entry.

9.7.4.2. Recognize the signs and symptoms of exposure to hazards.

9.7.4.3. List the consequences of exposure to hazards.

9.7.5. Communication

9.7.5.1. Define the required communication between the attendant and entrants.

9.7.5.2. Describe the required communication for evacuation and rescue plans.

9.7.6. Atmospheric Metering Equipment

9.7.6.1. Demonstrate the proper use of atmospheric monitoring equipment.

9.7.6.2. Describe the hazards the equipment should monitor for: toxics (CO and H2S), explosive/flammable (LEL), and oxygen (O2).

9.7.6.3. Ensure calibration and maintenance of the equipment is current.

9.7.7. Protective Equipment

9.7.7.1. Identify the personal protective equipment (PPE) needed for the hazards present.

9.7.7.2. Demonstrate the proper use of PPE in confined space work.

9.7.8. Rescue Equipment and Procedures

9.7.8.1. Recognize when to order evacuation (self-evacuate).

9.7.8.2. Outline self-evacuation procedures.

9.7.8.3. Describe how to initiate the emergency rescue plan.

9.7.9. Responsibilities of Individual Roles

9.7.9.1. Describe roles and responsibilities of all involved employees.

9.7.9.2. Describe how to handle unauthorized personnel.

9.8. **Evaluation of Program Effectiveness**

9.8.1. An evaluation of the effectiveness of the CSE program is essential to ensure that everyone is provided a safe working environment in and around regulated spaces. The effectiveness of the CSE program will be evaluated at least annually, and corrective action will be taken to resolve defects found in the program.

9.8.2. A review of cancelled confined space permits will be conducted annually, at a minimum, by the safety director and/or safety committee to ensure that:

9.8.2.1. CSE permits were properly authorized and used.

9.8.2.2. Adequate personal protective equipment was used.

9.8.2.3. Atmospheric monitoring equipment was properly calibrated and used.

9.8.2.4. The confined workspace was properly monitored by standby personnel.

9.8.2.5. Proper communication channels were established to facilitate an emergency rescue.

9.8.3. The responsible supervisor, in consultation with the safety director, will evaluate and document the effectiveness of the entire CSE program annually. In addition, any evidence of unsafe work practices or failure to use established confined space work procedures should be investigated immediately. The investigation will determine and document actions to correct any defects in the program, including target dates for implementation.

CARBON DIOXIDE: ADVERSE HEALTH EFFECTS – FACT SHEET

Symptoms of overexposure by inhalation include dizziness, headache, nausea, rapid breathing, shortness of breath, deeper breathing, increased heart rate (tachycardia), eye and extremity twitching, cardia arrhythmia, memory disturbances, lack of concentration, visual and hearing disturbances (including photophobia, blurred vision, transient blindness, hearing loss and ringing in the ears), sweating, restlessness, vomiting, shaking, confusion, flushed skin, panic, paresthesia (a sensation of numbness in the extremities), disorientation, convulsions, unconsciousness, coma and death. [31]

CO_2 Concentration	Duration	Physiological Impact/Health Effect
1,000 ppm	Less than 2 ½ hours	Impairs judgment, decision-making ability, and thinking skills on a short-term basis, even for healthy individuals.
2,500 ppm	Less than 2 ½ hours	Many individuals are rendered cognitively marginal or dysfunctional.
5,000 ppm with 20.9% Oxygen		Headache, lethargy, mental slowness, emotional irritation and sleep disruption.
6%	1-2 minutes	Hearing and visual disturbances
7% (70,000 ppm) with 20.9% Oxygen	5 minutes	Death
10% to 15%		Dizziness, drowsiness, severe muscle twitching, unconsciousness and death within a few minutes.
17% to 30%	Within 1 minute	Loss of controlled and purposeful activity, unconsciousness, coma, convulsions and death.
30% carbon dioxide with 70% Oxygen	30 seconds	Unconsciousness, with some subjects having seizures that were characterized as decerebrate (not cerebral functioning).

Even though oxygen is necessary to carry out cell functions, **it is not the lack of oxygen that stimulates breathing. Breathing is stimulated by an excess of CO_2.** If individual breaths too slowly (bradypnea), does not breathe deeply enough, (dyspnea), or is exposed to excessive CO_2 levels, too much CO_2 can build up. This causes acidosis, increased breathing and other physiological responses discussed above.

[31] United States. U.S. Dept. of Health, Education, and Welfare, Public Health Service / Center for Disease Control. National Institution for Occupational Safety and Health. Criteria for a Recommended Standard…. Occupational Exposure to Carbon Dioxide. Aug. 1976. HEW Publication No. (NIOSH) 76-194.

Confined Space Program

GASES AND VAPORS OFTEN FOUND IN CONFINED SPACES

Gas or Vapor	Heavier Than Air	Lighter Than Air	Poor Warning Properties	Good Warning Properties	Flammable?
Nitrogen	Same as air	Same as air	Yes	No	No
Oxygen	Same as air	Same as air	Yes	No	No, but promotes fire
Argon	Yes	No	Yes	No	No
Hydrogen	No	Yes	Yes	No	Yes
Helium	No	Yes	Yes	No	No
Acetylene	No	Yes	Yes	No	Yes
Sulfur Dioxide	Yes	No	No	Yes	No, but promotes fire
Chlorine	Yes	No	No	Yes	No, but promotes fire
Chlorine Dioxide	Yes	No	No	Yes	No, but promotes fire
Methane (Natural Gas)	No	Yes	Yes	No	Yes
Hydrogen Sulfide	Yes	No	Yes*	No	Yes
Organic Solvents	Yes	No	Usually	Not always	Usually but Not always
Carbon Monoxide	Same as air	Same as air	Yes	No	Yes
Carbon Dioxide	Yes	No	Yes	No	No

*Is a neurotoxin and causes olfactory fatigue ("deadens" the sense of smell); therefore, warning properties are poor.

CRANE SAFETY

Crane Safety

P&C Construction does not own or provide cranes or operators. All crane use and operation will be provided by a third-party vendor. As such P&C Construction will provide the Site Supervisor and Lift Director roles only. However, P&C Construction projects will enforce the policies and procedures below.

1. **Responsibilities**
    - 1.1. **Superintendent**
        - 1.1.1. The Superintendent is ultimately responsible for managing cranes while on site and managing their safe operation. Super may delegate steps in the standard operating procedure to the Foreman and/or P.E.
        - 1.1.2. Review Crane Section for Definitions and Roles of Lift Director, Crane Owner, Crane User
    - 1.2. **Foreman**
        - 1.2.1. Confirm completion of required crane use documents by crane user.
    - 1.3. **Safety Program Administrator**
        - 1.3.1. Attend Crane pre-con meeting.
        - 1.3.2. Advise Super and Foreman on crane use.
2. **S.O.P.**
    - 2.1. **Pre-Construction**
        - 2.1.1. Hold a meeting with crane vendor and tilt subcontractor prior to the crane arriving. The Resource Manager and Safety Program Administrator must be invited to the meeting.
        - 2.1.2. Follow Section 14 Crane Policy and use the required forms.
        - 2.1.3. Assign the crane roles.
        - 2.1.4. Attend the sub's pre-pick meeting.
        - 2.1.5. If the same pick will be completed multiple times use the pick plan as the PTP for daily discussion and sign off for acknowledgment.
    - 2.2. **Construction**
        - 2.2.1. Confirm that the crane is inspected prior to any use using the inspection form provided.
        - 2.2.2. Plan for the lift
            - 2.2.2.1. Fill out and sign the pick plan form.
            - 2.2.2.2. Fill out and sign the crane operation checklist (new).
            - 2.2.2.3. Discuss the plan and have employees sign off once training and planning are complete.
        - 2.2.3. If the same pick will be completed multiple times use the pick plan as the PTP for daily discussion and sign off for acknowledgment.
3. **Crane Definitions**
    - 3.1. **Site Supervisor:** Exercises supervisory control over the site on which a crane is used and over all the work being performed on site.
    - 3.2. **Lift Director:** Must be a qualified person, "A person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and

experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project".

3.3. **Crane User:** Arranges the crane's presence on a worksite and controls its use there.

3.4. **Crane Owner:** Has custodial control of the crane by virtue of lease or ownership.

3.5. **Crane Operator:** Certified and evaluated to operate the specific crane to be operated.

3.6. **Rigger/Signaler/Oiler:** Must have competent person training and be familiar with the lifts required on the project.

4. Crane Responsibilities

4.1. Site Supervisor for Crane Users

4.1.1. On P&C projects the superintendent will act in the Site Supervisor role and either they or the foremen will act in the Lift Director role depending on competence.

4.1.2. Ensure that all procedural steps are complete.

4.1.3. Provides site specific orientation to operators and other workers regarding crane use.

4.1.4. Provide observations and feedback to operators and the Lift Director to ensure safe operation.

4.1.5. Ensure that vehicles are properly inspected and maintained in safe operating condition.

4.1.6. Ensures that the site is adequately prepared for crane operation.

4.1.7. Provide program feedback to the program administrator.

4.2. Crane Owner

4.2.1. Have or make available inspection, testing and maintenance program records.

4.2.1.1. Provide Qualified Operators, Riggers and Signalers with documentation.

4.2.2. Inspect the crane at the beginning of the day or prior to each work shift, utilizing the crane inspection checklist.

4.2.3. Notify Lift Director of conditions that would impair the ability to safely operate the crane.

4.3. Lift Director

4.3.1. Must be present at the jobsite during lifting operations.

4.3.2. Plans and manages all lift planning and execution, collaborating with the operator.

4.3.3. Assures or confirms that the operator is Qualified (certified and evaluated) on the specific crane to be operated and has his certification on hand.

4.3.4. Ensures that all workers know their responsibilities, assigned duties and hazards.

4.3.5. Ensures that loads rigging is completed by a competent person.

4.4. Operators

4.4.1. Operate cranes for which they have been specifically **qualified**.

4.4.2. Operate all cranes in a safe manner, utilizing safe work practices.

4.4.3. Inspect the crane at the beginning of the day or prior to each work shift, utilizing the crane inspection checklist.

4.4.4. Report all equipment malfunctions and/or maintenance needs to supervisors immediately.

4.4.5. Wear a seatbelt when operating a crane.

4.4.6. Notify supervisor of conditions that would impair the ability to safely operate the crane.

4.5. **Riggers/Signalers/Oilers:** Must be certified and qualified on the lifts being performed.

4.5.1. Must be familiar with the crane that they are rigging.

4.5.2. Have received site specific training prior to crane use.

4.5.3. Have reviewed and understand the pick plan.

5. Rules

5.1. Powerline Safety in Oregon

5.1.1. Contact power provider to determine exact voltage of line(s) in play.

5.1.2. Identify the powerline safe work zone with **either** option below. There must be demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the operator from operating the equipment past those boundaries.

5.1.2.1. Option 1 Deenergize the line(s).

5.1.2.2. Option 2 Demarking boundaries (such as flags, elevated warning lines, barricades, or range limiting devices to prohibit the operating past the boundaries. Using OSHA Table A clearance. 1926.1408(h).

5.2. Powerline Safety in Washington

5.2.1. Contact power provider to determine exact voltage of line(s) in play.

5.2.2. Identify the powerline safe work zone with **either** option below. There must be demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the operator from operating the equipment past those boundaries.

5.2.2.1. Option 1 Deenergize the line(s).

5.2.2.2. Option 2 **All of the following must be employed in Washington**. Demarking boundaries (such as flags, elevated warning lines, barricades, or range limiting devices to prohibit the operating past the boundaries. Using OSHA Table A clearance. 1926.1408(h) See Work Zone Powerline Safety Checklist attached.

5.3. Only qualified personnel are permitted to operate crane.

5.4. Hand signals must be posted in job trailer (see attached).

5.5. Inspect the crane prior to use. A sample pre-shift inspection checklist is included.

5.6. A pick plan must be created and covered in the pre-lift meeting.

5.7. Never exceed the listed capacity of the crane. The crane is required to have a plate, clearly visible and readable, indicating load capacity and other handling information. Do not operate the crane if the information is missing.

5.8. Ensure the load is stable and secure before lifting and moving.

5.9. When operating, do not allow any body part to extend beyond the crane.

5.10. Maintenance will be completed only with the engine (motor) off and the mast lowered to the ground or properly supported utilizing proper lockout/tagout procedures.

5.11. When moving the crane, the boom must be fully retracted and placed at the proper angle.

5.12. Review the path of travel. Remove debris, fill in holes, or choose an alternate route. A top-heavy load can topple a lift with a slight shift caused by an uneven surface.

5.13. Operator must have another person to guide and assist in setup.

5.14. Only operators are permitted to ride on the crane; no passengers.

5.15. Do not allow anyone to pass directly under the hook, loaded or unloaded.

5.16. Never allow anyone to stand in the crane swing radius.

5.17. Observe jobsite traffic patterns and rules. Remember, cranes are the slowest vehicles on the site and may have obstructed views.

5.18. Never leave the crane unattended while the forks are raised. Never use a crane to hoist personnel unless all the following conditions are met:

- 5.18.1. This practice is authorized by your supervisor.
- 5.18.2. The platform is properly secured to the lift.
- 5.18.3. The lift is approved for lifting personnel with a properly designed platform for personnel.

5.19. Personnel being hoisted are protected with an appropriate guardrail system or wearing a personal fall arrest device secured to the platform in accordance with manufacturer's recommendations and specifications.

5.20. **Site-Specific Training Topics: Completed by Site Supervisor**

- 5.20.1. Surface conditions that could affect the vehicle's stability.
- 5.20.2. Load manipulation, stacking, and unstacking.
- 5.20.3. Pedestrian traffic.
- 5.20.4. Narrow site conditions and other restricted places.
- 5.20.5. Hazardous locations where the vehicle will be operated.
- 5.20.6. Closed environments and other areas where insufficient ventilation could cause a buildup of carbon monoxide or diesel exhaust.
- 5.20.7. Other potentially hazardous environmental conditions in the workplace that could affect safe operation.

ELECTRICAL SAFETY

Electrical Safety

1. Responsibilities

1.1. Superintendent

1.1.1. The Superintendent is responsible for the planning and execution of the temp construction power on the project.

1.2. Foremen

1.2.1. The foreman is responsible for the day to day inspection and movement of the temp power supply using the electrician manage spider box and bull cord inspections.

1.3. Employees

1.3.1. All employees are responsible to use only tools and cords that have been inspected for electrical continuity, only attaching to GFCI power at all times and reporting items that fail or have not been tested.

2. Overall Electrical SOP

2.1. All bologna cords will be tested, modified and shortened by a licensed electrician.

2.2. Extension cords will be tested and modified at Baker-York or in the field by a competent person. Extension cords will be provided in 100 and 50' lengths only.

2.3. Do not shorten or modify an extension cord in the field.

2.4. The company employs the use of the assured grounding seasonal color tape to record the testing of cords and electrical tools only.

2.5. The company also uses GFCI on all electrical work.

3. Working around overhead powerlines and power feeds to buildings.

3.1. Maintain 10' from all overhead powerlines 50KV or less.

3.2. Arching is a real threat to metal equipment and tools. EXCEPTION: 1926.416(a)(1) states that employees must be protected against electric shock by deenergizing the circuit and grounding it or by guarding it effectively by insulation or other means.

3.3. Weather heads and services to building with shielded lines require NO minimum approach distance. All that is required is notification and identification to prevent breaking or penetrating the lines.

4. Electrical Cords

4.1. **Repairs and Usage –** Almost every construction operation uses extension cords and power tools within their shops and operations. There are some OHSA and OR-OSHA regulations you need to be aware of for their use and repair. It should be pointed out, however, that local electrical codes, if more stringent, may supersede some OHSA and/or OR-OSHA requirements.

4.2. **Electrical Cord Usage –** The following are highlights of the more common requirements for extension and power tool cords.

4.2.1. Perhaps the most common violation found with extension and power tool cords is the lack of a grounding pin. This pin provides a low-resistance path to ground if a fault with the equipment occurs. Any cord lacking this pin should be immediately taken out of service and repaired or replaced.

4.2.2. All extension, power tool, and temporary lighting cords are required to be designed for hard or extra hard usage. Some examples of these types are: SJ, SJO, SJT, SJTO (junior hard service cord) and S, SO, ST, STO (hard service cord).

4.2.3. Flexible cords and cables should be protected from damage. Sharp corners and projections should be avoided. Flexible cords and cables may pass through doorways or other pinch points if protection is provided to avoid damage.

4.2.4. Electrical cords are required to be rated for usage. In other words, cord sets made from Romex, flat cord, lamp cord, or other similar cord types are prohibited. Electrical boxes (normally used for mounting to studs) cannot be used with receptacles and cords to make an extension cord. Romex may be used for temporary lighting or similar duty if protected from physical damage.

4.3. **Electrical Cord Repair**. **–** OSHA and OR-OSHA allow repairs to be made to electrical extension cords and power tool cords. The following are highlights of the more common requirements for extension and power tool cords.

4.3.1. Electrical cords that have been cut through may be spliced by mechanical (compression) connectors, soldering, or brazing. The connector may be pre-insulated or should be insulated with heat or cold shrink tubing or insulating tape. All insulation should be equal to or exceed the original insulation value. The spliced wires should then be insulated overall.

4.3.2. **Note:** Cords less than 12 gauges may not be allowed to be repaired. It may be necessary review OSHA and OR-OSHA interpretations.

4.3.3. Replacement electrical cord ends are required to be grounded, three conductor types with a strain-relief connector. This is typically a two-screw bracket with compress around a cord jacket. If the cord is likely to be used in wet locations, the cord ends need to be the rain-tight style.

4.3.4. Be careful when connecting electrical cord ends. The green (grounding) conductor should be connected to the ground pin, the white (neutral) conductor should be connected to the wider blade, and the black (hot) conductor should be connected to the narrower blade.

5. Ground Fault Protection/Assured Equipment Grounding

5.1. **Scope –** The purpose of this procedure is to establish a standardized program for ground fault protection on all construction sites and to protect employees from the electrical hazards associated with 120-volt AC current. This program applies to all company and employee owned cord sets, receptacles, and cord and plug connected hand tools (not double insulated). All shall be tested and color coded. References: NEC 305-6 (a), (b); CAL OSHA Title 8 2405.4; FED OSHA 1926.404 (b).

5.2. **Policy –** All 120 V 60 hertz 15 and 20 ampere outlets on construction sites (which are not part of the building's permanent wiring) must be protected by the use of ground fault circuit interrupters (GFCI). All other electrical receptacles and cord sets not covered above must be protected by an assured grounding program.

5.3. **Responsibility –** The general foreman or foreman in charge of the job will be responsible for maintaining ground fault protection on the job site. The project superintendent or a designated representative will perform the required testing and complete the required documentation while the cord is on site.

5.3.1. **Procedure Ground Fault Circuit Interrupters (GFCIs) –** All 120-volt single phase 15 and 20-amp receptacle outlets on site, which are not part of the permanent wiring of the building or structure used by employees, must have approved GFCIs for personal protection.

Special note: Receptacles on a two-wire single phase portable or vehicle mounted generator rated not more than 5 kW, where the circuit conductors are insulated from the generator frame and all other ground surfaces, need not be protected with GFCI.

5.3.2. **Assured Equipment Grounding Conductor Program –** As an alternative to using GFCI protection on a construction site, the project superintendent may elect to institute an assured equipment grounding program. The program shall comply with the following minimum requirements:

5.3.2.1. This written description shall be made available at the site.

5.3.2.2. One or more competent persons will be designated to implement the program.

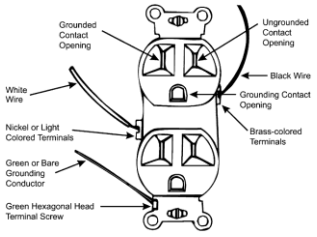
5.3.2.3. Each employee shall be instructed to visually inspect each cord and plug for external defects such as deformed or missing pins, internal damage, or insulation damage on a daily basis.

5.3.2.4. **Note:** All defective equipment will be tagged "Out of Service." If equipment is repaired, it must be tested prior to return to service by a designated employee.

5.3.2.4.1. Extension cords and equipment will be tested by a competent worker as follows:

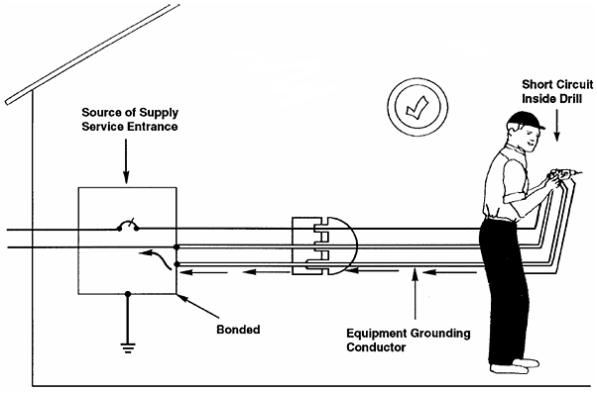
5.3.2.4.2. **Receptacle Tester –** Utilize to show terminals are correctly connected to ground and wire is continuous, with no breaks. See Diagram 1, Picture 1, and Diagram 2.

Diagram 1



Picture 1

Diagram 2



5.3.2.4.3. **Continuity Tester –** Utilize to assure ground is continuous from metal frame (a) through cord to third prong (b). Also touch tester to (c), then (d) prongs to detect possible ground fault. See Picture 2, Diagram 3, and Diagram 4.

Electrical Safety

Picture 2

Diagram 3

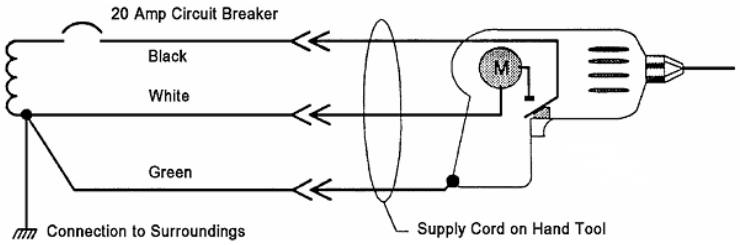
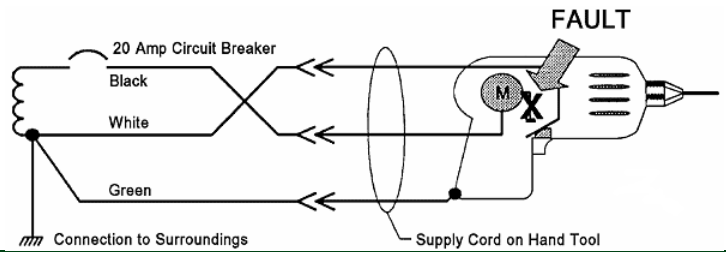


Diagram 4



5.3.2.5. **Testing frequency:**

5.3.2.5.1. Before initial use

5.3.2.5.2. After any repair work

5.3.2.5.3. When damage is suspected

5.3.2.5.4. Every three months

5.3.2.6. **Test records:** The following color coding utilizing appropriate colored electrical tape will be placed on all cord sets:

January to March	White
April to June 30	Green
July to September 30	Red
April to June 30	Green
October to December 31	Orange
Repair	Brown

Note: Prior to return of electrical cords and tools, all colored tape will be removed. All tools and cords will be tested and taped prior to delivery by Baker-York.

5.3.2.7. Temporary power spider boxes will be tested and logged utilizing a log tag, which includes date of inspection and initial of inspector.

ID of Equipment Tested	Date Tested	Action Taken, If Any	Tested By

5.3.2.8. Temporary power and lighting (light stringers, quartz light strands, temporary distribution racks, etc.) shall be visually inspected prior to use by a designated employee. A site assured grounding documentation log may be used when required by site contractors.

6. Additional Requirements

6.1. The decision to utilize GFCIs does not eliminate the need for many additional requirements for an assured equipment grounding program. Items 3.0 B 3, 4, and 5 are applicable even if GFCIs are used and if all equipment is a double insulated design.

7. Portable Powered Hand Tools

7.1. Tools shall be inspected prior to use. Refer to manufacturer's recommendations for inspection guidelines.

7.2. Power cords shall not be used for hoisting or lowering tools.

7.3. Inspect the power cord; the tool must have three-prong grounding cord or double insulated case.

7.4. Avoid working with powered tools in wet conditions. Assure cords are not lying in water.

7.5. Remove damaged tools from service. Tag the damaged tool "Out of Service." Do not use the damaged tool until the tool has been properly repaired or replaced.

EXCAVATIONS, TRENCHING AND SHORING

Excavations, Trenching and Shoring

As a rule, the company will sub-contract all excavation and underground utility work. You will not likely enter a trench requiring shoring. In the event our employee needs to enter a trench with shoring, contact the Safety Program Administrator prior to entry.

1. Responsibility

1.1. Employer

1.1.1. Monitor the overall effectiveness of this program.

1.1.2. Ensure atmospheric testing and equipment is available when required.

1.1.3. Provide appropriate personal protective equipment (PPE) when required.

1.1.4. Provide appropriate protective systems.

1.1.5. Provide training to affected employees and supervisors.

1.1.6. Provide technical assistance as needed.

1.1.7. Review and update this program on an annual basis.

1.2. Safety Program Administrator

1.2.1. Ensure required inspections, tests, and recordkeeping functions have been performed by completing program audits on all trenches and excavations created by the company.

1.2.2. Monitor the overall effectiveness of this program.

1.2.3. Assist with atmospheric testing and equipment selection as needed.

1.2.4. Provide appropriate personal protective equipment (PPE).

1.2.5. Provide training for supervisors and affected employees.

1.2.6. Provide technical assistance.

1.2.7. Review and update the program on an annual basis or more frequently if needed.

1.3. Competent Person (Excavator while on site)

1.3.1. One who has been trained in and can identify hazards or working conditions that are unsafe for employees in the workplace, and who has the authority to correct these hazards. The subcontractor must provide a competent person on site.

1.3.1.1. Complete inspections of excavations for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions by inspecting:

1.3.1.1.1. Adjacent areas.

1.3.1.1.2. Protective systems.

1.3.1.2. Complete inspections **daily** and as situations warrant: These inspections are only required when employee exposure can be reasonably anticipated.

1.3.1.2.1. Prior to the start of work.

1.3.1.2.2. As needed throughout the shift.

1.3.1.2.3. After every rainstorm.

1.3.1.2.4. Other hazard-increasing occurrences.

1.3.2. Knowledgeable about soil analysis.

1.3.3. Knowledgeable about trenching and excavation protective systems.

1.3.4. Knowledgeable about the requirements of Division 3, Subpart P, Excavation Standard.

1.4. **Superintendent**

1.4.1. The supervisor also may be the competent person.

1.4.2. Collect daily trench inspections to ensure jobsite conditions are safe for employees to work in excavations.

1.4.3. Collect daily equipment inspections.

1.4.4. Ensure safe work practices by excavation subcontractor.

1.5. **Foremen**

1.5.1. Ensure the daily work by excavators is compliant with OSHA standards and presents no obvious hazards.

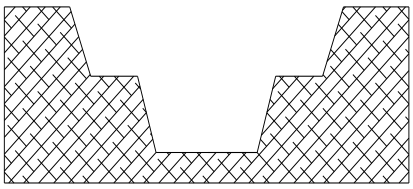
2. Definitions

2.1. **Accepted engineering practices:** the standards of practice required by a registered professional engineer.

2.2. **Aluminum hydraulic shoring:** a manufactured shoring system consisting of aluminum hydraulic cylinders (cross braces) used with vertical rails (uprights) or horizontal rails (wales). This system is designed to support the sidewalls of an excavation and prevent cave-ins.

2.3. **Bell-bottom pier hole:** a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

2.4. **Benching (benching system):** a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.



Benching System

2.5. **Cave-in:** the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.

2.6. **Competent person:** one who has been trained to identify hazards or working conditions in the workplace that are unsafe for employees, and who has the authority to have these hazards corrected.

2.7. **Cross braces:** the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or wales.

2.8. **Excavation:** any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

2.9. **Faces or sides:** the vertical or inclined earth surfaces formed as a result of excavation work.

2.10. **Failure:** the movement or damage of a structural member or connection that makes it unable to support loads.

2.11. **Hazardous atmosphere:** an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful that may cause death, illness, or injury.

2.12. **Protective system:** a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

2.13. **Ramp:** an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.

2.14. **Sheeting:** the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

2.15. **Shield (shield system):** a structure used in an excavation to withstand cave-ins and protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses. Shields used in trenches are usually referred to as "trench boxes" or "trench shields."

2.16. **Shoring (shoring system):** a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.

2.17. **Sloping (sloping system):** sloping the sides of the excavation away from the excavation to protect employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench, etc.).

2.18. **Stable rock:** natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.

2.19. **Support system**: a structure such as underpinning, bracing, or shoring that provides support to an adjacent structure, underground installation, or the sides of an excavation.

2.20. **Tabulated data:** tables and charts approved by a registered professional engineer and used to design and construct a protective system.

2.21. **Trench (trench excavation):** a narrow excavation (in relation to its length) made below the surface of the ground.

2.22. **Uprights:** the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with, or interconnected to each other are often called "sheeting."

2.23. **Wales:** the horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

3. Training

3.1. Training Requirements

3.1.1. Personnel working around trenching and/or excavation work will be trained in the requirements of this program.

3.1.2. Training will be provided prior to employees entering and/or being assigned duties in excavations.

3.1.3. Training records will be maintained by the Safety Program Administrator. The training record will include:

3.1.3.1. Date of the training program.

3.1.3.2. Name of the instructor who conducted the training.

3.1.3.3. Name of the employee who received the training.

3.2. **Training Items**

Training provided to all personnel who perform work in excavations will include:

3.2.1. Work practices to be followed during excavating and/or working in excavations.

3.2.2. Use of PPE typically required during excavation work. The typical PPE includes but is not limited to safety shoes, hardhats, and fall protection devices.

3.2.3. Procedures to be followed when a hazardous atmosphere exists or could reasonably be expected to develop during work in an excavation.

3.2.4. The OR-OSHA Excavation Standard, 29 CFR 1926.650, Subpart P; WAC 296-155-650 Subpart N; OSHA Excavation Standard, 29 CFR 1926.650, Subpart P, or applicable jurisdiction.

3.2.5. Emergency and non-entry rescue procedures.

4. Excavation Requirements

4.1. Utilities and jobsite inspection prior to excavation entry will be completed by the competent person to determine necessary safety measures.

4.2. Surface encumbrances including, but not limited to, equipment, materials, supplies, permanent installations (i.e., buildings or roadways), trees, brush, boulders, and other objects at the surface that could present a hazard to employees working in the excavation will be removed or supported to protect all employees.

4.3. Underground installations that may be encountered during excavation work will be located and marked prior to opening an excavation. This includes the location of sewer, telephone, fuel, electric, water, or any other underground installations or wires. Arrangements will be made as needed by the competent person, superintendent, or project manager with the appropriate utility entity for the protection, removal, shutdown, or relocation of underground installations.

4.3.1. When it is not possible to establish the exact location of utility installations, the work may proceed with caution if detection equipment or other safe and acceptable means are used to locate the utility.

4.3.2. Excavation will be done in a manner not to endanger the underground installations or the employees engaged in the work. Utilities left in place will be protected by barricades, shoring, suspension, or other means necessary to properly protect employees.

4.4. Protection of the public will be provided as necessary prior to the start of excavation operations. Such protection may include barricades, walkways, lighting, and postings.

4.4.1. Guardrails, fences, and/or barricades will be provided for excavations adjacent to walkways, driveways, and other pedestrian or vehicle thoroughfares. Warning lights or other illumination will be maintained as needed for the safety of the public and employees from sunset to sunrise.

4.4.2. Wells, holes, pits, shafts, and all similar hazardous excavations will be effectively barricaded or covered, and appropriate signage posted as necessary to prevent unauthorized access. Temporary excavations of this nature will be backfilled as soon as possible.

4.4.3. Walkways or bridges with standard guardrails will be provided where **employees and the general public** are permitted to cross over excavations. Workers in the excavation exposed to falling objects from walkways or bridges will be protected by toe boards or other effective protection to prevent the hazard of falling objects.

4.5. Protection of employees by stairs, ladders, or ramps will be provided at excavation sites where employees are required to enter trench excavations over four feet deep. Ladders will be placed so the maximum distance of lateral travel (along the length of the trench) to reach the egress does not exceed 25 feet.

4.6. Employees exposed to vehicular traffic will be provided with high-visibility vests or other suitable high-visibility garments marked with or made of reflectorized material. Warning vests worn by flaggers will be yellow or orange, made of reflectorized material when worn during night work, and must comply with the 2009 Manual on Uniform Traffic Control Devices (MUTCD). Emergency lighting, such as spotlights or portable lights, will be provided as needed to safely perform work.

4.7. Exposure to falling loads will be prevented by never allowing an employee underneath loads being handled by lifting or digging equipment. Employees are required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.

4.8. A warning system will be used when mobile equipment is operated adjacent to the edge of an excavation and the operator does not have a clear and/or direct view of the edge of the excavation. The warning system may consist of barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

4.9. Hazardous atmospheres may occur in excavations, for example, in an excavation in landfill areas, near running vehicles, areas where hazardous substances are stored nearby, near containing gas pipelines, etc.

4.9.1. Adequate precautions will be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. This may include ventilation or supplied air-line respirators.

4.9.2. Ensure lifelines are being used when the potential for hazardous atmospheres exist.

4.9.3. When hazardous atmospheres exist or are expected, means for summoning rescue personnel shall be immediately available on site. Your rescue plan cannot be simply calling 911. Special attention must be given to this consideration when working after normal business hours.

4.9.4. If a hazardous atmosphere is detected, do not enter the trench. If employees are in the excavation when a hazardous atmosphere is detected, all employees shall be ordered out of the excavation.

4.9.5. Contact the competent person or superintendent.

4.10. Personal protective equipment (PPE) will be provided to all employees working in trenches and/or excavations. Employees working in trenches and/or excavations will wear hardhats and appropriate work boots. Eye and face protection, hearing protection, hand protection, or other PPE may be utilized to protect from associated hazards as needed.

4.11. Walkways and guardrails will be provided **when employees or equipment** are permitted to cross over excavations. Guardrails will be provided on walkways, **accessible only to jobsite personnel**, and are six feet or more above lower levels.

4.12. Protection from water accumulation hazards will be provided in excavation operations. Employees are not permitted to work in excavations that contain or are accumulating water unless appropriate precautions are taken to protect employees from hazards. Precautions may include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of safety harnesses and lifelines.

4.12.1. The use of water removal equipment and operation will be monitored by the competent person. When an excavation interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means will be used to prevent surface water from entering the excavation.

4.12.2. Excavations exposed to runoff from heavy rain require inspection by the competent person.

4.13. Weather conditions require attention. Changes in weather affect the amount of pressure exerted by the soil onto the walls of the trench. When soils become saturated with water, the pressure increases due to added weight. However, as soil dries, it may lose some of its cohesive properties which can result in structural failure of the trench's walls.

4.14. Stability of adjacent structures will be maintained; the competent person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks, or other structures.

4.14.1. Support systems (such as shoring, bracing, or underpinning) will be used to ensure the stability of structures and the protection of employees.

4.14.2. Sidewalks, pavements, and structures will not be undermined unless a support system is provided to protect employees and structures from possible collapse.

4.15. Protection from falling objects and loose rocks or soil will be provided to employees working in excavations and/or trenches. Employees will be protected from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection will consist of:

4.15.1. Removal of loose debris on the edge of the trench.

4.15.2. Installation of protective barricades, such as wire mesh or timber.

4.15.3. Benching sufficient to contain falling material.

4.16. Daily inspection will be conducted by the competent person prior to employees entering the excavation. The competent person will inspect the excavations, adjacent areas, and protective systems for evidence of a situation that could result in cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions. The inspections will be conducted by the competent person as needed throughout the shift. Inspections will be completed after every rainstorm or other hazard-increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

4.16.1. When the competent person finds evidence of a situation that may result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees will be removed from the hazardous area until precautions are taken to ensure employee safety.

4.16.2. The competent person will maintain a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

5. Requirements for Protective Systems

5.1. Protection of Employees in Excavations

5.1.1. Employees in an excavation shall be protected from cave-ins by using either an adequate sloping or benching system or an adequate support or protective system. The only exceptions are:

5.1.1.1. Excavations made entirely in stable rock.

5.1.1.2. Excavations less than five feet (four feet in Washington) in depth where examination of the ground by the competent person provides no indication of a potential cave-in.

5.1.2. Protective systems shall be capable of resisting all loads that could reasonably be expected to be applied to the system.

5.2. Design of Sloping and Benching Systems

5.2.1. The slope and configuration of sloping and benching systems shall be selected and/or constructed by or under the direction of the competent person as follows:

5.2.2. **Option 1:** Allowable configurations and slopes.

5.2.2.1. Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the competent person uses one of the other options listed below.

5.2.2.2. The slopes used shall be excavated in accordance with the slopes shown for Type C soil. Refer to 1926 Subpart P Appendix A.

5.2.3. **Option 2:** Maximum allowable slopes and allowable configurations for sloping and benching systems will meet the requirements as stated in 1926 Subpart P Appendix A and B.

5.2.4. **Option 3:** Designs using other tabulated data.

5.2.4.1. The design of sloping or benching systems may be selected from and will be constructed in accordance with other tabulated data, such as tables and charts. The tabulated data used must be in written form and include all of the following:

5.2.4.1.1. Identification of the factors that affect the selection of a sloping or benching system.

5.2.4.1.2. Identification of the limits of use of the data, including the maximum height and the angle of the slopes determined to be safe.

5.2.4.1.3. Other information needed by the user to make correct selection of a protective system.

5.2.4.2. One copy of the tabulated data that identifies the registered professional engineer who approved the data shall be maintained at the job site during construction of the protective system. After that time the data may be stored off the job site, but a copy of the data shall be made available to the compliance officer upon request.

5.2.5. **Option 4:** Design by a registered professional engineer: Sloping and benching systems not utilizing Option 1, Option 2, or Option 3 under this section will be approved by a registered professional engineer.

5.2.5.1. Designs will be in written form and will include at least the following:

5.2.5.1.1. The maximum height and angle of the slopes that were determined to be safe for the particular project.

5.2.5.1.2. The identity of the registered professional engineer approving the design.

5.2.5.2. At least one copy of the design shall be maintained at the job site while the slope is being constructed. After that time the design need not be at the job site, but a copy shall be made available to a compliance officer upon request.

5.3. The design of support systems, shield systems, and other protective systems shall be selected and/or constructed by or under the direction of the competent person with the requirements of the applicable following:

5.3.1. **Option 1:** Designs using 1926 Subpart P Appendix A, C, and D. Design of timber shoring in trenches will meet the requirements as stated in 1926 Subpart P Appendix C. Design of aluminum hydraulic shoring shall be in strict compliance with manufacture's specifications and tabulated data, but if manufacturer's tabulated data cannot be used, then designs will be in accordance with 1926 Subpart P Appendix D.

5.3.2. **Option 2:** Designs using manufacturer's tabulated data

5.3.2.1. Support systems, shield systems, or other protective systems drawn from manufacturer's tabulated data will be constructed and used in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

5.3.2.2. Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer will only be allowed after the manufacturer issues specific **written** approval.

5.3.2.3. Manufacturer's specifications, recommendations, limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations will be kept in written form at the job site during construction and use of the protective system. After that time this data may be stored off the job site; a copy will be made available to the compliance officer upon request.

5.3.3. **Option 3:** Designs using other tabulated data.

5.3.3.1. Designs of support systems, shield systems, or other protective systems will be selected from and be constructed in accordance with tabulated data, such as tables and charts.

5.3.3.2. The tabulated data shall be in written form and include all of the following:

5.3.3.2.1. Identification of the factors that affect the selection of a protective system drawn from such data.

5.3.3.2.2. Identification of the limits of use of the data.

5.3.3.2.3. Information needed by the user to make a correct selection of a protective system from the data.

5.3.3.3. One copy of the tabulated data that identifies the registered professional engineer who approved the data shall be maintained at the job site during construction of the protective system. After that time the data may be stored off the job site, but a copy of the data shall be made available to a compliance officer upon request.

5.3.4. **Option 4:** Design by a registered professional engineer.

5.3.4.1. Support systems, shield systems, and other protective systems not using the prior options a registered professional engineer will approve.

5.3.4.2. Designs will be in written form and will include the following:

5.3.4.2.1. A plan indicating the sizes, types, and configurations of the materials to be used in the protective system.

5.3.4.2.2. The identity of the registered professional engineer approving the design.

5.3.4.3. At least one copy of the design shall be maintained at the job site while the slope is being constructed. After that time the design need not be at the job site, but a copy shall be made available to the compliance officer upon request.

6. Materials and Equipment

6.1. Materials and equipment used for protective systems will be inspected and free from damage or defects that might affect their proper function.

6.2. Manufactured materials and equipment used for protective systems will be used and maintained in accordance with the recommendations of the manufacturer, and in a manner, that will prevent employee exposure to hazards.

6.3. When materials and/or equipment used for protective systems are damaged, the competent person will evaluate suitability for continued use. If the competent person cannot ensure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, the materials and/or equipment will be removed from service until they can be evaluated and approved by a registered professional engineer before being returned to service.

7. Installation and Removal of Support

7.1. General

7.1.1. Members of support systems will be securely connected together to prevent sliding, falling, kick outs, or other potential hazards.

7.1.2. Support systems will be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

7.1.3. Individual members of support systems will not be subjected to loads exceeding those they were designed to support.

7.1.4. Before temporary removal of individual support members begins, additional precautions will be taken as directed by the competent person, superintendent, and/or project manager to ensure the safety of employees.

7.1.5. Removal of support systems will begin at, and progress from, the bottom of the excavation. Members will be released slowly. If there is any indication of possible failure

of the remaining members of the structure or possible cave-in of the sides of the excavation, the work will be halted until the competent person can properly inspect it.

7.1.6. Backfilling will progress together with the removal of support systems from excavations.

8. Shield Systems

8.1. General

8.1.1. Shield systems will not be subjected to loads that are greater than those they were designed to withstand.

8.1.2. Shields will be installed in a manner that will restrict lateral or other hazardous movement of the shield that could occur during cave-in or unexpected soil movement.

8.1.3. Employees will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.

8.1.4. Employees will not be allowed in the shields system when the systems are being installed, removed, or moved.

FALL PROTECTION

Fall Protection

Approximately 40% of fatal injuries in the construction industry are due to falls. We feel this is unacceptable. The purpose of this fall protection and walking working surfaces program is to protect the safety and health of all employees and properly train and evaluate employees who are performing work where fall hazards exist.

1. Responsibilities

1.1. Management

1.1.1. Management is responsible for the administration of this program and will audit and make changes when necessary to ensure success of the program.

1.2. Safety Program Administrator

1.2.1. Develop specific policies and procedures pertaining to fall protection and walking working surfaces.

1.2.2. Implement a training program based on the general principles of fall protection and walking working surfaces.

1.2.3. Coordinate the training for fall protection and walking working surfaces.

1.2.4. Maintain the training certification records of employee training sessions.

1.2.5. Review the effectiveness of the program.

1.3. Supervisors

1.3.1. Ensure that employees have received appropriate training at their jobsites.

1.3.2. Provide observations and feedback to employees to ensure jobsite safety.

1.3.3. Ensure that fall protection equipment is properly inspected and maintained in a safe operating condition.

1.3.4. Issue a harness from BY and fill out the fall protection agreement form

1.3.5. Provide program feedback to the safety program administrator.

1.4. Employees

1.4.1. Take care of and return at the end of employment, the harness issued to you by the company.

1.4.2. Utilizing personal fall arrest systems (PFAS) or other fall protection equipment on which they have been specifically trained and authorized.

1.4.3. Work in a safe manner and utilize safe work practices.

1.4.4. Inspect the fall protection equipment at the beginning of day or prior to each work shift.

1.4.5. Report all equipment defects to supervisors immediately.

1.4.6. Wear appropriate personal protective equipment.

1.4.7. Notify supervisor of jobsite conditions where safety hazards exist.

2. Definitions

2.1. **Anchorage:** a secure point of attachment for lifelines, lanyards, or deceleration devices.

2.2. **Body belt:** a strap that is secured around the waist and attached to a lanyard, lifeline. Used for positioning only.

2.3. **Body harness:** straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders; it is attached to other components of a personal fall arrest system.

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

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

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

2.7. **Energy shock absorber:** a device that limits shock-load forces on the body.

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

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

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

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

2.12. **Hole:** a gap or void two inches or more in its least dimension, in a floor, roof, or other walking/working surface.

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

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

2.15. **Lifeline:** a component consisting of a flexible line for connection to an anchorage at one end to hang vertically or for connection to anchorages at both ends to stretch horizontally and that connects other components of a personal fall arrest system to the anchorage.

2.16. **Opening:** a gap or void 30 inches or higher and 18 inches or wider in a wall or partition, through which employees can fall to a lower level.

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

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

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

2.20. **Retractable fall limiter:** a fall arrest device that allows free travel without slack rope but locks instantly when a fall begins.

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

2.22. **Safety-monitoring system:** a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards for roofing work only.

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

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

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

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

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

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

3. Fall Protection Systems

3.1. Covers

3.1.1. All covers will be secured to prevent accidental displacement.

3.1.2. Covers will be marked with "HOLE" or "COVER."

3.1.3. Covers located in roadways will be capable of supporting twice the axle load of the largest vehicle that might cross them.

3.1.4. Covers will be capable of supporting twice the weight of employees, equipment, and materials that may cross them.

3.2. **Guardrail Systems**

3.2.1. Guardrail systems will be erected at unprotected edges, ramps, runways, and/or holes to protect employees from hazards. The following are the specifications for the erection of guardrail systems.

3.2.1.1. **Top rails will be:**

3.2.1.1.1. At least ¼ inch in diameter (steel or plastic banding is unacceptable).

3.2.1.1.2. Flagged every six feet or less with a high visibility material if wire rope is used.

3.2.1.1.3. Inspected by competent person as frequently as necessary to ensure strength and stability.

3.2.1.1.4. Forty-two inches (plus or minus three inches) above the walking/ working level.

3.2.1.1.5. Capable of withstanding at least 200 pounds of force applied in any direction on the top rail without failure.

3.2.1.1.6. Adjusted to accommodate the height of stilts, if they are in use.

3.2.1.2. **Mid rails will be:**

3.2.1.2.1. Constructed of screens, mesh, intermediate vertical members, and/or solid panels.

3.2.1.2.2. A minimum of 21 inches high.

3.2.1.2.3. Capable of withstanding at least 150 pounds of force applied in any direction on the midtrial without failure.

3.2.1.3. Gates or removable guardrail sections are to be placed across openings of hoisting areas or holes when they are not in use to prevent access.

3.3. **Personal Fall Arrest Systems (PFAS)**

3.3.1. Personal fall arrest systems will be issued to and used by employees as determined by the competent person and/or qualified person, and may consist of anchorage, connectors, body harness, deceleration device, lifeline, and/or suitable combinations. Personal fall arrest systems will:

3.3.1.1. Limit the maximum arresting force to 1,800 pounds.

3.3.1.2. Be rigged so an employee cannot free fall more than six feet or contact any lower level.

3.3.1.3. Bring an employee to a complete stop and limit the maximum deceleration distance traveled to 3½ feet.

3.3.1.4. Be inspected prior to each use for damage and deterioration.

3.3.1.5. Be removed from service if any damaged components are detected.

3.3.2. All components of a fall arrest system will meet the specifications of the OR-OSHA Fall Protection Standard or other regulating entity and will be used in accordance with the manufacturer's instructions and specifications.

3.3.2.1. Do not use non-locking snap hooks.

3.3.2.2. D-rings and locking snap hooks will:

3.3.2.2.1. Have a minimum tensile strength of 5,000 pounds.

3.3.2.2.2. Be proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or suffering permanent deformation.

3.3.2.3. Lifelines will be:

3.3.2.3.1. Designed, installed, and used under the supervision of a qualified person.

3.3.2.3.2. Protected from cuts and abrasions.

3.3.2.4. Self-retracting lifelines and lanyards must have ropes and straps (webbing) made of synthetic fibers, and will:

3.3.2.4.1. Sustain a minimum tensile load of 3,600 pounds if they automatically limit free fall distance to two feet.

3.3.2.4.2. Sustain a minimum tensile load of 5,000 pounds (includes rip stitch, tearing, and deforming lanyards).

3.3.2.5. Anchorages must support at least 5,000 pounds per person attached and will be:

3.3.2.5.1. Designed, installed, and used under the supervision of a qualified person.

3.3.2.5.2. Capable of supporting twice the weight expected to be imposed on it.

3.3.2.5.3. Independent of any anchorage used to support or suspend platforms.

3.4. **Personal Fall Restraint Systems**

3.4.1. Personal fall restraint systems will be rigged to prevent the user from falling any distance.

3.4.2. Fall restraint systems will use fall arrest system components and follow manufacturer's instructions.

3.4.3. The attachment point to the body belt or full body harness may be at the back, front, or side D-rings.

3.5. **Anchorages** used for attachment of personal fall restraint equipment will be independent of any anchorage being used to support or suspend platforms and will be capable of supporting 3,000 lbs. (13.3kN) per employee attached, or be designed, installed, and used under the supervision of a qualified person.

3.6. **Positioning Device Systems**

3.6.1. Body belt or body harness systems will be set up, so an employee can free fall no farther than two feet and will be secured to an anchorage capable of supporting twice the potential impact load or 3,000 pounds, whichever is greater. Requirements for snap hooks, D-rings, and other connectors are the same as detailed in this program under Personal Fall Arrest Systems.

3.7. **Safety Monitoring System**

3.7.1. Safety monitoring system will only be used as a fall protection system for roofing work on roof slopes of 2 in 12 or less.

3.7.2. The use of a safety monitoring system is not allowed on roofs more than 50 feet in width.

3.7.3. The safety monitor will be a competent person selected by the employer and will be capable of monitoring the safety of other employees and complying with the following:

3.7.3.1. The safety monitor will be competent to recognize fall hazards.

3.7.3.2. The safety monitor will warn employees when it appears that an employee is unaware of a fall hazard or is acting in an unsafe manner.

3.7.3.3. The safety monitor will be on the same walking/working surface and within visual sight distance of the employees being monitored.

3.7.3.4. The safety monitor will be close enough to communicate orally with the employees.

3.7.3.5. The safety monitor will not have other responsibilities that may take the monitor's attention from the monitoring function.

3.7.4. Mechanical equipment will not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations.

3.7.5. Only employees engaged in roofing work will be allowed in an area where employees are being protected by the safety monitoring system.

3.8. **Safety Net Systems**

3.8.1. Safety net systems must be installed no more than 30 feet below the walking/working surface with sufficient clearance to prevent contact with the surface below and will be installed with sufficient vertical and horizontal distances as described in the OR-OSHA Fall Protection Standard or other regulating entity.

3.8.2. All nets will be inspected at least once a week by a competent person for wear, damage, or deterioration. Defective nets will be removed from use and replaced with acceptable nets.

3.8.3. All nets will be in compliance with mesh, mesh crossing, border rope, and connection specifications as described in the OR-OSHA Fall Protection Standard or other regulating entity.

3.8.4. When nets are used on bridges, the potential fall area from the walking/working surface will remain unobstructed.

3.8.5. Objects that have fallen into safety nets will be removed as soon as possible and at least before the next working shift.

3.9. **Warning Line Systems**

3.9.1. A warning line system will not be used as fall protection on roof slopes greater than 2 in 12.

3.9.2. Warning line systems consisting of supporting stanchions and ropes, wires, or chains will be erected around all sides of roof work areas.

3.9.2.1. Lines will be flagged at six-foot intervals with high visibility materials.

3.9.2.2. The lowest point of the line (including sag) will be between 34 and 39 inches from the walking/working surface.

3.9.2.3. Stanchions of warning line systems will be capable of resisting at least 16 pounds of force.

3.9.2.4. Ropes, wires, or chains will have a minimum tensile strength of 500 pounds.

3.9.2.5. The warning line systems will be erected at least 10 feet from the edge. Where 10 feet is NOT possible due to space constraints, six feet is acceptable as it meets Oregon OSHA minimum requirements.

3.9.3. Employees will be allowed in the area between a roof edge and a warning line when the employees are equipped with appropriate fall protection.

3.10. **Falling Object Protection**

3.10.1. When guardrail systems are in use, the openings will be small enough to prevent potential passage of falling objects. The following procedures will be followed.

3.10.1.1. No materials (except masonry and mortar) will be stored within four feet of working edges.

3.10.1.2. Excess debris will be removed regularly to keep work areas clear.

3.10.1.3. During roofing work, materials and equipment will be stored at least six feet from the roof edge unless guardrails are erected at the edge.

3.10.1.4. Stacked materials must be stable and self-supporting.

3.10.1.5. Canopies will be strong enough to prevent penetration by falling objects.

3.10.1.6. Toe boards erected along the edges of overhead walking/working surfaces will be:

3.10.1.6.1. Capable of withstanding a force of at least 50 lbs.

3.10.1.6.2. Solid, a minimum of 3½ inches tall, and no more than ¼ inch clearance above the walking/working surface.

3.10.2. Equipment will not be piled higher than the toe board unless paneling or screening has been erected above the toe board.

4. Training

4.1. All employees who may be exposed to fall hazards are required to receive training on how to recognize hazards, and how to minimize their exposure. Employees will receive training as soon after employment as possible, and before they are required to work in areas where fall hazards exist.

4.2. A record of employees who have received training and training dates will be maintained by the Safety Department. Training of employees by a competent person will include:

4.2.1. Nature of the fall hazards employees may be exposed to.

4.2.2. Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.

4.2.3. Use and operation of controlled access zones, guardrails, personal fall arrest systems, safety nets, warning lines, and safety monitoring systems.

4.2.4. Role of each employee in the Safety Monitoring System (if this system is used).

4.2.5. Limitations of the use of mechanical equipment during roofing work on low slope roofs (if applicable).

4.2.6. Correct procedures for equipment and materials handling, and storage and erection of overhead protection.

4.2.7. Requirements of the OR-OSHA Fall Protection Standard, 29 CFR 1926, Subpart M.

4.3. Additional training will be provided on an annual basis, or as needed when changes are made to this fall protection program, an alternative fall protection plan, or the OSHA fall protection standard.

4.4. The latest training certification will be maintained by the safety department. Retraining for an employee will occur with any of the following situations:

4.4.1. Changes in the workplace render previous training obsolete.

4.4.2. Changes in the types of fall protection systems or equipment to be used render previous training obsolete.

4.4.3. Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

FIRE PREVENTION

Fire Prevention

The purpose of this Fire Prevention Program is to comply with OSHA 29 CFR 1926.150 and 1910.38.

1. Responsibility

1.1. Safety Program Administrator

1.1.1. Manage the Fire Prevention Program for the company and maintain all records. The Safety Program Administrator shall also: Plan for and provide proper types and quantities of fire extinguishers for the project.

1.1.2. Develop and administer the company's fire prevention training program.

1.1.3. Ensure that fire control equipment and systems are properly maintained.

1.1.4. Control fuel source hazards.

1.1.5. Conduct Fire Risk Surveys and make recommendations.

1.2. Superintendent

1.2.1. Plan for and provide proper types and quantities of fire extinguishers for the project.

1.3. Foreman

1.3.1. Manage and place fire extinguishers on the site.

1.3.2. Inspect the fire extinguishers monthly.

1.4. Employees

1.4.1. Complete required training before working without supervision.

1.4.2. Conduct operations safely to eliminate or reduce the risk of fire.

1.4.3. Report potential fire hazards to their supervisors.

1.4.4. Follow fire emergency procedures.

2. S.O.P.

2.1. Good housekeeping limits the risk of fires. Employees shall take the following precautions:

2.1.1. Minimize the storage of combustible materials.

2.1.2. Make sure that doors, hallways, stairs, and other exit routes are kept free of obstructions.

2.1.3. Dispose of combustible waste in covered, airtight, metal containers.

2.1.4. Use and store flammable materials in well-ventilated areas away from ignition sources.

2.1.5. Use only nonflammable cleaning products.

2.1.6. Keep incompatible (i.e., chemically reactive) substances away from each other.

2.1.7. Perform "hot work" (i.e., welding or working with an open flame or other ignition sources) in controlled and well-ventilated areas.

2.1.8. Keep equipment in good working order (i.e., inspect electrical wiring and appliances regularly and keep motors and machine tools free of dust and grease).

2.1.9. Ensure that heating units are safeguarded.

2.1.10. Report all gas leaks immediately to the supervisor. All gas leaks shall be repaired immediately upon notification.

2.1.11. Repair and clean up flammable liquid leaks immediately.

2.1.12. Keep work areas free of dust, lint, sawdust, scraps, and similar material.

2.1.13. Do not rely on extension cords if wiring improvements are needed and take care not to overload circuits with multiple pieces of equipment.

2.1.14. Ensure that required hot work permits are obtained.

2.1.15. Turn off electrical equipment when not in use.

2.2. Maintenance of equipment according to manufacturers' specifications will minimize fire risk. The company will also comply with requirements of the National Fire Protection Association (NFPA) codes for specific equipment. Only properly trained individuals shall perform maintenance work.

2.3. The following equipment is subject to maintenance, inspection, and testing procedures:

2.3.1. Equipment installed to detect fuel leaks, control heating, and control pressurized systems.

2.3.2. Portable fire extinguishers, automatic sprinkler systems, and fixed extinguishing systems.

2.3.3. Detection systems for smoke, heat, or flame.

2.3.4. Fire alarm systems.

2.3.5. Emergency backup systems and the equipment they support.

3. Types of Hazards

3.1. The following addresses the major workplace fire hazards at our facilities and jobsite locations, and the procedures for controlling the hazards.

3.1.1. Electrical fire hazards, electrical system failures, and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from lose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

3.1.2. To prevent electrical fires, employees shall:

3.1.2.1. Make sure that there is a fire extinguisher every 3000 ft.

3.1.2.2. Make sure that worn wires are replaced by a qualified person.

3.1.2.3. Use only appropriately rated fuses.

3.1.2.4. Never use extension cords as substitutes for wiring improvements.

3.1.2.5. Use only approved extension cords, e.g., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label.

3.1.2.6. Check wiring in hazardous locations where the risk of fire is especially high.

3.1.2.7. Check electrical equipment to ensure that it is either properly grounded or double insulated.

3.1.2.8. Ensure adequate spacing while performing maintenance.

3.2. Portable electric heaters shall have tip over protection that automatically shuts off the unit when it is tipped over. There shall be adequate clearance between the heater and combustible furnishings or other materials at all times.

3.3. Office fires have become more likely because of the increased use of electrical equipment such as: computers, printers, speakers, copiers, etc. To prevent office fires, employees shall:

3.3.1. Avoid overloading circuits with office equipment.

3.3.2. Turn off nonessential electrical equipment at the end of each workday.

3.3.3. Keep storage areas clear of rubbish.

3.3.4. Ensure that extension cords are not placed under carpets.

3.3.5. Ensure that trash and paper set aside for recycling is not allowed to accumulate.

3.4. Cutting, welding, and open flame work—ensure the following:

3.4.1. All necessary hot work permits have been obtained prior to start of work.

3.4.2. Cutting and welding are done by qualified and authorized personnel in designated cutting and welding areas whenever possible.

3.4.3. Adequate ventilation is provided.

3.4.4. Torches, regulators, pressure-reducing valves, and manifolds are UL listed or FM approved.

3.4.5. Oxygen-fuel gas systems are equipped with listed and/or approved backflow valves and pressure-relief devices.

3.4.6. Cutters, welders, and helpers are wearing eye protection and appropriate protective clothing to prevent injury.

3.4.7. Cutting or welding is prohibited in sprinklered areas while sprinkler protection is out of service.

3.4.8. Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues or accumulations in confined spaces.

3.4.9. Cutting or welding is prohibited on metal walls, ceilings, or roofs built of combustible, sandwich-type panel construction or having combustible covering.

3.4.10. Confined spaces, such as tanks, are tested to ensure that the atmosphere is not over ten percent of the lower flammable limit before cutting or welding in or on the tank.

3.4.11. Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.

3.4.12. Fire watch has been established.

3.5. Flammable and combustible materials will regularly be evaluated by the Safety Program Administrator. This is completed using the Flammable and Combustible Materials Checklist.

3.5.1. Class A combustibles include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in non-specialized areas such as offices.

3.5.2. To handle Class A combustibles safely:

3.5.2.1. Dispose of waste daily.

3.5.2.2. Keep trash in metal-lined receptacles with tight-fitting covers (metal wastebaskets that are emptied every day do not need to be covered).

3.5.2.3. Keep work areas clean and free of fuel paths that could allow a fire to spread.

3.5.2.4. Keep combustibles away from accidental ignition sources, such as hot plates, soldering irons, or other heat- or spark-producing devices.

3.5.2.5. Store paper stock in metal cabinets.

3.5.2.6. Store rags in metal bins with self-closing lids.

3.5.2.7. Do not order and/or store excessive amounts of combustibles.

3.5.2.8. Make frequent inspections to anticipate fires before they start.

3.5.2.9. Water, multi-purpose dry chemical (ABC), and halon 1211 are approved fire extinguishing agents for Class A combustibles. (Note: halon has been determined to be an ozone-depleting substance and is no longer being manufactured. Existing systems using halon can be kept in place.)

3.6. Class B combustibles include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols.

3.7. To handle Class B combustibles safely:

3.7.1. Use only approved pumps, taking suction from the top, to dispense liquids from tanks, drums, barrels, or similar containers (or use approved self-closing valves or faucets).

3.7.2. Do not dispense Class B flammable liquids into containers unless the nozzle and container are electrically interconnected by contact or by a bonding wire. Either the tank or container must be grounded.

3.7.3. Store, handle, and use Class B combustibles only in approved locations where vapors are prevented from reaching ignition sources such as heating or electric equipment, open flames, or mechanical or electric sparks.

3.7.4. Do not use a flammable liquid as a cleaning agent inside a building (the only exception is in a closed machine approved for cleaning with flammable liquids).

3.7.5. Do not use, handle, or store Class B combustibles near exits, stairs, or any other areas normally used as exits.

3.7.6. Do not weld, cut, grind, or use unsafe electrical appliances or equipment near Class B combustibles.

3.7.7. Do not generate heat, allow an open flame, or smoke near Class B combustibles.

3.7.8. Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.

3.7.9. Water should not be used to extinguish Class B fires caused by flammable liquids. Water can cause the burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid. The following fire-extinguishing agents are approved for Class B combustibles: carbon dioxide, multi-purpose dry chemical (ABC), halon 1301, and halon 1211.

3.8. Smoking is prohibited in all company facilities and jobsites. Smoking is allowed in designated smoking areas only.

Fire Prevention

4. Training

4.1. The Safety Program Administrator will provide basic fire prevention training to all employees upon employment, and will maintain documentation of the training, which includes:

4.1.1. Review of 29 CFR 1926.150 and 1910.38 and how it may be accessed.

4.1.2. This fire prevention program.

4.1.3. Good housekeeping practices.

4.1.4. Proper response and notification in the event of a fire.

4.1.5. Instruction on the use of portable fire extinguishers.

4.1.6. Recognition of potential fire hazards.

4.2. Supervisors shall train employees about the fire hazards associated with the specific materials and processes to which they are exposed and will maintain documentation of the training. Employees will receive this training:

4.2.1. Upon initial assignment.

4.2.1.1. Annually.

4.2.1.2. When changes in work processes dictate additional training.

FORKLIFT SAFETY

Forklift Safety

The purpose of the Forklift Safety program is to protect the safety and health of all employees and properly train and evaluate employees who are authorized to safely operate forklifts.

1. Responsibilities

1.1. Program Administrator/Safety Program Administrator

1.1.1. Develop specific policies and procedures pertaining to the operation and maintenance of powered industrial trucks.

1.1.2. Implement a training program based on the general principles of safe truck operation, the type of vehicle(s) being used in the workplace, and hazards created by the use of the vehicle(s).

1.1.3. Coordinate the training and performance testing of powered industrial truck operators.

1.1.4. Maintain the training certification records and performance tests of employees included in the training sessions.

1.1.5. Regularly review the effectiveness of the program.

1.2. Supervisors

1.2.1. Ensure that employees who operate powered industrial trucks receive appropriate training.

1.2.2. Provide observations and feedback to operators to ensure safe equipment operation.

1.2.3. Ensure that the vehicles are properly inspected and maintained in safe operating condition.

1.2.4. Provide program feedback to the program administrator.

1.3. Operators

1.3.1. Operate forklifts for which they have been specifically trained and authorized.

1.3.2. Operate all forklifts in a safe manner, utilizing safe work practices.

1.3.3. Inspect the forklift at the beginning of the day or prior to each work shift, utilizing the forklift inspection form.

1.3.4. Report all equipment malfunctions and/or maintenance needs to supervisors immediately.

1.3.5. Wear a seatbelt when operating a forklift.

1.3.6. Notify supervisor of conditions that would impair the ability to safely operate the forklift.

2. SOP

2.1. Only trained and authorized personnel are permitted to operate forklifts.

2.2. Inspect the forklift prior to use. See a sample pre-shift inspection checklist at the end of the Forklift Safety section.

2.3. Never exceed the listed capacity of the forklift. The forklift is required to have a plate, clearly visible and readable, indicating load capacity and other handling information. Do not operate the forklift if the plate is missing.

2.4. Ensure the load is stable and secure before lifting and moving.

2.5. When operating, do not allow any body part to extend beyond the forklift body.

2.6. Never place any part of the body in the mechanism of the mast or between the mast and the body of the lift.

2.7. Maintenance will be completed only with the engine (motor) off and the mast lowered to the ground or properly supported utilizing proper lockout/tagout procedures.

2.8. Review the path of travel. Remove debris, fill in holes, or choose an alternate route. A top-heavy load can topple a lift with a slight shift caused by an uneven surface.

2.9. Only operators are permitted to ride on the lifts; no passengers.

2.10. Do not allow anyone to pass under the raised forks, loaded or unloaded, unless the forks have been blocked to prevent sudden lowering.

2.11. Never allow anyone to stand between the forklift and a solid object.

2.12. Drive at slow speeds. Higher speeds exaggerate movements and create instability.

2.13. Observe jobsite traffic patterns and rules. Remember, forklifts are the slowest vehicles on the site and may have obstructed views.

2.14. Keep the forks as low as possible when traveling. This improves vision and makes the forklift more stable.

2.15. Cross perpendicular obstructions, such as, ruts, rail tracks, by driving diagonally.

2.16. Ascend or descend a grade or ramp with the load facing up.

2.17. Only enter an elevator with a capacity is greater than the combined weight of the forklift, the load, and the operator. When inside, shut off the engine, and set the brakes before moving the elevator.

2.18. Only drive onto a platform, floor, railway-car, trailer, or truck that will support the combined weight of operator, forklift, and load.

2.19. Before entering a vehicle or railcar, ensure the vehicle or railcar is secured from movement. Verify the dock plate is properly secured and rated for the weight of the forklift and its load.

2.20. Never leave the forklift unattended while the forks are raised.

2.21. Always leave the forklift with the mast vertical, the forks on the ground, the brakes set, and the power off.

2.22. Never use a forklift to hoist personnel unless all of the following conditions are met:

2.23. This practice is authorized by your supervisor.

2.24. The platform is properly secured to the lift.

2.25. The lift is approved for lifting personnel with a properly designed platform for personnel.

2.26. Personnel are properly protected in the normal working position from moving parts of the forklift that represent a hazard.

2.27. Personnel being hoisted are protected with an appropriate guardrail system or wearing a personal fall arrest device secured to the platform in accordance with manufacturer’s recommendations and specifications.

2.28. The forklift operator remains at the controls of the forklift at all times while personnel are elevated.

Forklift Safety

3. Training Requirements

3.1. Before an employee can operate a forklift, the employer must ensure the employee is capable of operating forklifts. The operator must complete the forklift training and demonstrate competency. Training is a combination of formal instruction, practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. If an employee has previously [employment, training, etc.] received the required training or any portion thereof, there is no requirement for retraining if the employee can demonstrate competency.

3.2. General Training Topics

3.2.1. An overview of the written forklift program.

3.2.2. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate.

3.2.3. Seatbelt use.

3.2.4. Differences between the truck and an automobile.

3.2.5. Truck controls and instrumentation: where they are located, what they do, and how they work.

3.2.6. Engine or motor operation.

3.2.7. Steering and maneuvering; operating limitations.

3.2.8. Visibility (including restrictions due to loading).

3.2.9. Fork and attachment adaptation, operation, and use limitations.

3.2.10. Vehicle capacity.

3.2.11. Vehicle inspection and maintenance.

3.2.12. Refueling and/or charging and recharging of batteries.

3.2.13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

3.3. Workplace-Specific Training Topics

3.3.1. Surface conditions that could affect the vehicle's stability.

3.3.2. Load manipulation, stacking, and unstacking.

3.3.3. Pedestrian traffic.

3.3.4. Narrow aisles and other restricted places.

3.3.5. Hazardous locations where the vehicle will be operated.

3.3.6. Ramps and other sloped surfaces that could affect the vehicle's stability.

3.3.7. Closed environments and other areas where insufficient ventilation could cause a buildup of carbon monoxide or diesel exhaust.

3.3.8. Other potentially hazardous environmental conditions in the workplace that could affect safe operation.

3.5. **Refresher Training Topics**

Refresher training will be conducted to ensure operators have the knowledge and skills to operate forklifts safety. Forklift operator skills will be evaluated at least every three years with both a written and performance evaluation.

Refresher training in relevant topics will be provided to operators when:

3.5.1. The operator has been observed operating the vehicle in an unsafe manner.

3.5.2. The operator has been involved in an accident or near-miss incident.

3.5.3. The operator has received an evaluation that indicates they are not operating the truck safely.

3.5.4. The operator is assigned to drive a different type of truck.

3.5.5. A condition in the workplace changes that could affect safe operation of the truck.

4. Safe Work Practices

4.1. **Forklift Inspection**

4.1.1. Forklift trucks shall be inspected at the beginning of the day or prior to the work shift.

4.1.2. Forklifts will not be placed in service if the inspection items show the forklift to be damaged, broken, or inoperable. Notify you supervisor.

4.1.3. Do not operate an unsafe forklift.

4.1.4. Keep forklifts clean and free of excess dirt, oil, and grease.

4.2. **Repairs and Maintenance**

4.2.1. Only Baker-York or other rental company authorized mechanic will perform maintenance and repairs to forklifts and other powered industrial trucks.

4.3. **Changing and Charging Batteries**

4.3.1. Batteries will only be changed by the rental service provider

4.4. **LP Gas Cylinder Changing**

4.4.1. LP gas cylinders will only be changed in the designated changing will be done by the rental service provider.

HAZARD COMMUNICATIONS (SDS)

Hazard Communications (SDS)

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Administrator will oversee the program and review it annually.

1.1.2. Will provide all employees annual training on the program and hazard communication processes and rules.

1.2. Superintendents

1.2.1. Supers are responsible to convey this program and require its compliance on our projects.

1.3. Foremen

1.3.1. Foremen are responsible to require SDS lists from all subcontractors upon arrival to the site to mobilize for work.

1.3.2. Foremen are responsible to require labeling of all secondary chemical containers.

1.4. Employees

1.4.1. All employees are required to use secondary container labeling

1.4.2. Attend all training provided on the program and rules of hazard communication

2. S.O.P.

2.1. SDS and Labeling

2.1.1. All SDS product sheets are maintained and kept by SDSMobile App.

2.1.2. If secondary containers are used, the foreman will assure the proper labeling of containers according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), and will include:

2.1.2.1. The product identifier and words, pictures, symbols, or a combination that provides at least general information about the hazards of the chemicals.

2.2. If a secondary container is intended and used immediately by the same person for the work shift, it is not required to have a secondary label.

3. Multi-Employer Projects

3.1. To ensure that other contractors' employees have access to the SDS/MSDS for the hazardous chemicals or products used on a multi-employer job site, it is the responsibility of the project supervisor/superintendent to provide the contractors the following information:

3.1.1. The name and location of the hazardous chemicals to which they may be exposed while on the job site.

3.1.2. Any recommendations or appropriate protective measure to be taken by the other contractor's employees who may be exposed to the hazardous chemicals.

3.1.3. Location of SDS for hazardous chemicals on site. (Note: on most projects the general contractor will maintain copies of SDS/MSDS for all subcontractors on site.)

3.1.4. Information on the labeling system being used.

Hazard Communications (SDS)

4. List of Hazardous Chemicals

4.1. All projects will have a printed or handwritten list available on the wall of the job trailer or in the foreman's truck on mobile crews.

Product Name	Subcontractor	Location

5. Training

5.1. Training will be performed at least annually for hazard communication according to OSHA's 1926.59 (1910.1200). This training will include:

5.1.1. Where the written hazard communication program is located, as well as the SDS/MSDS location.

5.1.2. Overview of the Hazardous Communication Standard (1910.1200).

5.1.3. Operations and areas where there are hazardous chemicals in the work area.

5.1.4. Methods used to detect the presence and release of a hazardous chemical.

5.1.5. Physical and health hazards of chemicals in their work areas.

5.1.6. Warning properties and types of exposures (i.e.: odor, welding smoke, skin contact, ventilation, etc.).

5.1.7. Work practices and personal protective equipment to prevent adverse exposures to these chemicals.

5.1.8. Labeling

5.1.9. Emergency procedures to follow if an adverse exposure occurs.

5.1.10. Emergency procedures for spills or non-routine tasks, such as confined space entry.

5.2. After receiving this training, the employee will sign a form documenting they have received hazardous communication training and are aware of where to check for additional information (SDS/MSDS). The same procedures will be followed if new hazardous chemicals are introduced into the work area.

6. Program Evaluation

6.1. The program administrator will update the written program when any change in the workplace affects employees' use of respirators, or at least annually.

HEARING CONSERVATION

Hearing Conservation

The Company has developed a hearing conservation program to enhance our employees' health and safety.

We intend to provide training, hearing protectors, and audiometric testing for those employees with a noise exposure level at or above the minimum guideline established and regulated by the Occupational Safety and Health Administration (OSHA): {8 hour time-weighted, A-Weighted Scale average of 85 decibels or a 50% dose or greater}.

Areas where information indicates that any employee's exposure may equal or exceed the minimum guideline have been identified and monitored. Future monitoring will be conducted as conditions warrant by contacting the Safety Program Administrator who will schedule the monitoring through our:

- Insurance carrier industrial hygienists,
- OR-OSHA consultative, or
- An AGC industrial hygiene consultant.

Each project manager and/or project supervisor will ensure that each employee under their supervision that meet or exceeded the noise exposure level guidelines are included in this program.

The following procedure outlines how we will accomplish this plan.

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Provide testing at orientation and annually.

1.1.2. Provide results as requested.

1.2. Superintendent

1.2.1. Responsible and accountable for project safety.

1.2.2. Commits to ensuring the safety of every employee in the workplace and leads by example.

1.3. Foreman

1.3.1. Monitors work sound levels and workers compliance with hearing conservation procedures.

1.3.2. Conducts enforcement of the hearing conservation program.

1.3.3. Provides hearing protection.

1.4. Employee

1.4.1. Works in a safe manner at all times.

1.4.2. Always protects hearing.

1.4.3. Complies with hearing conservation program.

2. Training

Annually each employee will receive training on items covered in the initial training and updated information consistent with changes in protective equipment and work processes. This training will be scheduled by the Safety Program Administrator.

2.1. Develops, implements, and maintains the company's safety and health program and training program.

2.2. Prior to exposure of high noise levels, employees will be trained in:

2.3. Effects of noise on hearing.

2.4. The purpose of hearing protectors, the advantages, disadvantages and attenuation of various types, and instructions on selection, fitting, use, and care.

2.5. The right to access to records

3. **Audiometric Testing**

3.1. Employees exposed to regulated noise levels must be given an audiometric test to establish a valid baseline audiogram against which subsequent audiograms can be compared. This baseline test will be conducted prior to 180 days of employment. Audiograms will be given annually for employees exposed to regulated noise levels at no cost to the employees.

The department will be responsible for scheduling employees not already included in the program for baseline audiometric testing prior to initial exposure to regulated noise levels.

3.2. If there is a possible shift in an individual's baseline audiogram, additional measures will be taken. This might include:

3.2.1. Advise superintendents, and foremen supervisors on relevant regulations and practices regarding safety.

3.2.2. Retesting of the audiogram within 30 days.

3.2.3. Retesting of the audiogram by another service provider.

3.2.4. Noise exposure evaluations to the individual.

3.2.5. Additional noise engineering controls being utilized by the employee.

3.2.6. Refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.

3.2.7. Referred for a clinical audiological evaluation or ontological examination as appropriate.

HEAT AND COLD STRESS

Heat and Cold Stress

1. Responsibilities

1.1. Superintendent

1.1.1. The Super is responsible for heat and cold stress awareness on the project, to make water and the air-conditioned job shack conference room available as a place to cool/warm stresses workers.

1.1.2. On projects where we are self-performing work, the Super is responsible to provide electrolyte fluids and extra breaks depending on the level of heat/cold hazard.

1.2. Foremen

1.2.1. The Foremen on projects where the company is the GC, are responsible to observe subcontractor workers and aid subcontractor foremen in recognizing and preventing heat/cold stress.

1.2.2. On projects where the company is acting as a subcontractor, the foreman is responsible for all the employees in his care.

2. S.O.P.

2.1. When heat-related illness hazards are present, some (or all) of the following actions will be taken:

2.1.1. Additional rest breaks will be provided during peak temperature times.

2.1.2. Water will be provided and made readily accessible in sufficient quantity to provide one quart per employee per hour.

2.1.3. Employees will be encouraged to frequently drink small quantities of water. This will vary depending on the temperature, work environment, work activity, and break schedule.

2.1.4. New employees or employees off the job for two weeks or more will limit time of moderate to heavy work to 50% on the first day and increase work by 10% each day until acclimatized.

2.1.5. Cooling towels will be provided to employees.

2.1.6. There may be a work/rest regimen, starting jobs earlier and ending earlier to avoid the hot times of the day, provisions for gaining access to shade, etc.

2.1.7. Shaded areas will be available for breaks.

2.1.8. Employees working in remote locations will be contacted periodically.

3. High Heat Procedures

3.1. On days when heat is abnormally high are anticipated and/or occur, the following additional measures must be met.

3.1.1. Additional breaks must be provided.

3.1.2. Additional breaks are to be in air-conditioned space.

3.1.3. Call for workers prior to high heat days to allow for acclimation. If employees are new, allow a ramp up of work intensity to full work load that allows for acclimation to heat.

3.1.4. **Superintendents are responsible for:**

3.1.4.1. Providing additional electrolyte replenishing fluids.

3.1.4.2. Providing ample space and time for additional breaks.

3.1.5. **Foremen are responsible for:**

3.1.5.1. Checking in with workers on a regular basis throughout the shift.

3.1.5.2. Facilitating fluid availability and distribution.

3.1.5.3. Facilitating additional breaks.

4. Training

4.1. Training will be conducted prior to employees working in conditions or before any anticipated exposure to heat or cold stress is anticipated.

4.2. All training will be provided prior to outdoor work assignments presenting heat-related illness hazards, and at least annually thereafter. Training will be documented, and records will be kept by the Safety Department. First aid awareness and immediate actions that will be taken in the event of a heat-related illness will be included in the training.

4.3. Training in the following topics will be provided to all employees who may be exposed to a heat-related illness hazard:

4.3.1. The environmental factors that contribute to the risk of heat-related illness.

4.3.2. Awareness of personal factors that may increase susceptibility to heat illness.

4.3.3. Procedures for identifying, evaluating, and controlling exposure.

4.3.4. The importance of removing personal protective equipment during all breaks.

4.3.5. The importance of frequent consumption of small quantities of water; one quart or more over the course of an hour may be necessary when the work environment is hot, and employees may be sweating more than usual in the performance of their duties.

4.3.6. The importance of acclimatization.

4.3.7. The different types of heat-related illness and the common signs and symptoms of heat-related illness.

4.3.8. The importance of immediately reporting to the safety program administrator, directly or through the employee's supervisor, any symptoms or signs of heat illness in themselves or in coworkers.

4.3.9. The procedure for responding to symptoms of possible heat-related illness, including how emergency medical services will be provided should they become necessary.

4.3.10. The purpose and requirements of this standard.

4.3.11. The worker's right to receive the protections provided by this standard.

4.4. **Supervisor Training**

Prior to assignment, supervisors must have training on the following topics:

4.4.1. The information required to be provided in employee training as described above.

4.4.2. The procedures the supervisor is to follow to implement the applicable provisions in this section.

4.4.3. The procedures the supervisor is to follow when an employee exhibits signs or symptoms consistent with possible heat-related illness, including emergency response procedures.

4.4.4. Procedures for moving employees to a place where they can be reached by an emergency medical service provider, if necessary.

4.4.5. How to provide clear and precise directions to the emergency medical provider who needs to find the work site.

5. Heat Stress Awareness

5.1. Time is critical when people are experiencing heat stress/heat stroke. The quicker any employee experiencing symptoms can be removed from the heat and cooled down, the better the chances are for a full recovery.

5.2. Never leave an employee who is experiencing heat-related problems by themselves; if they do not respond quickly to cooling attempts, immediately call emergency medical services.

5.3. If a coworker is experiencing difficulty, do not hesitate to bring it to the attention of the supervisor or lead worker. In the event that medical treatment is needed beyond first aid and 911 must be called, we will Call AMR immediately.

5.4. The following chart helps employees recognize the main types of heat-related illnesses, signs, symptoms, and the appropriate treatment to reduce the effects of the heat-related illness. This chart will be posted in the job trailer.

Type	Signs and Symptoms	First Aid and Treatment
Sunburn	• Red, hot skin • May blister	• Move to shade, loosen clothing • Apply cool compresses or water
Heat Rash	• Red, itchy skin • Bumpy skin • Skin infection	• Apply cool water or compresses • Keep affected area dry • Control itching and infection with prescribed medication
Heat Cramps	• Muscle spasms in legs or abdomen • Grasping the affected area • Abnormal body position	• Move person to a cooler location • Stretch or massage muscles for cramps • Get medical evaluation if cramps persist • Give cool water or electrolyte-containing fluid to drink
Heat Exhaustion	• Headaches • Clumsiness • Dizziness, lightheadedness, fainting • Weakness, exhaustion, fatigue • Heavy sweating; clammy, moist skin	• Move person to a cooler place (do not leave alone) • Loosen and remove heavy clothing that restricts evaporative cooling • If conscious, provide small amounts of cool water to drink • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling • Lay flat and elevate feet

	• Irritability, confusion • Nausea, vomiting • Paleness • High pulse rate	• Evaluate mental status (ask who, where, when questions) • Call 911 if not feeling better within a few minutes
Heat Stroke	• Any of the above, but more severe • Sweating may or may not be present • Red or flushed/hot, dry skin • Bizarre behavior • Mental confusion or losing consciousness • Panting/rapid breathing • Rapid, weak pulse • Seizures or fits • Can be fatal	• **Call 911** • Move person to a cooler place (do not leave alone) • Cool worker rapidly • If conscious, provide small amounts of water to drink • Loosen and remove heavy clothing that restricts evaporative cooling • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling • Lay flat and elevate feet • Monitor airway and breathing, administer CPR if needed

6. Cold Stress Awareness

6.1. Cooling of body parts may result in various cold injuries: nonfreezing injuries, freezing injuries, and hypothermia, which is the most serious. Nonfreezing cold injuries include chilblain, immersion foot, and trench foot. Frost nip and frostbite are freezing injuries.

6.2. Toes, fingers, ears, and the nose are at greatest risk because these areas do not have major muscles to produce heat. In addition, the body will preserve heat by favoring the internal organs and thus reducing the flow of blood to extremities under cold conditions. Hands and feet tend to get cold more quickly than the torso because:

6.2.1. They lose heat more rapidly since they have a higher surface area-to-volume ratio, and

6.2.2. They are more likely to be in contact with cold surfaces than other parts of the body.

6.3. If the eyes are not protected with goggles in high wind chill conditions, the corneas of the eyes may freeze.

6.4. The most severe cold injury is hypothermia, which occurs from excessive loss of body heat and the consequent lowering of the inner core temperature (internal temperature of the body). Hypothermia can be fatal.

6.5. **Frost nip:**

6.5.1. Is the mildest form of a freezing cold injury. It occurs when ear lobes, noses, cheeks, fingers, or toes are exposed to the cold and the top layers of skin freeze. The skin of the affected area turns white and it may feel numb. The top layer of skin feels hard, but the deeper tissue still feels normal (soft).

6.5.2. Frost nip can be prevented by wearing warm clothing and footwear. It is treated by gentle rewarming (e.g., holding the affected tissue next to unaffected skin of the victim or of another person). As for all cold-induced injuries, never rub the affected parts—ice

crystals in the tissue could cause damage if the skin is rubbed. Do not use very hot objects such as hot water bottles to rewarm the area or person.

6.6. **Frostbite**

6.6.1. Is a common injury caused by exposure to extreme cold or by contact with extremely cold objects (especially those made of metal). It may also occur in normal temperatures from contact with cooled or compressed gases. Frostbite occurs when tissue temperature falls below the freezing point (0°C/32°F), or when blood flow is obstructed. Blood vessels may be severely and permanently damaged, and blood circulation may stop in the affected tissue. In mild cases, the symptoms include inflammation of the skin in patches accompanied by slight pain. In severe cases, there could be tissue damage without pain, or there could be burning or prickling sensations resulting in blisters. Frostbitten skin is highly susceptible to infection, and gangrene (local death of soft tissues due to loss of blood supply) may develop.

6.7. **Hypothermia**

6.7.1. Hypothermia is a medical emergency. At the first sign, find medical help immediately. The survival of the victim depends on their co-worker's ability to recognize the symptoms of hypothermia. The victim is generally not able to notice his or her own condition.

6.7.2. First aid for hypothermia includes the following steps:

6.7.2.1. Seek medical help immediately. Hypothermia is a medical emergency.

6.7.2.2. Ensure that wet clothing is removed.

6.7.2.3. Place the victim between blankets (or towels, newspaper, etc.) so body temperature can rise gradually. Body-to-body contact can help warm the victim's temperature slowly. Be sure to cover the person's head.

6.7.2.4. Give warm, sweet (caffeine-free, nonalcoholic) drinks unless the victim is rapidly losing consciousness, unconscious, or convulsing.

6.7.2.5. Quickly transport the victim to an emergency medical facility.

6.7.2.6. Do not attempt to rewarm the victim on a site (e.g., do not use hot water bottles or electric blankets).

6.7.2.7. Perform CPR (cardiopulmonary resuscitation) if the victim stops breathing. Continue to provide CPR until medical aid is available. The body slows when it is very cold, and in some cases, hypothermia victims that have appeared dead have been successfully resuscitated.

Heat and Cold Stress

Table 1

Stage	Core Temperature	Signs and Symptoms
Mild Hypothermia	37.2–36.1ºC (99–97ºF)	Normal shivering may begin
	36.1–35ºC (97–95ºF)	Cold sensation, goose bumps, unable to perform complex tasks with hands, shivering can be mild to severe, hands numb
Moderate Hypothermia	35–33.9ºC (95–93ºF)	Intense shivering, muscle incoordination becomes apparent, movements slow and labored, stumbling pace, mild confusion may appear alert. Use sobriety test; if unable to walk a 9 meter (30 foot) straight line, the person is hypothermic.
	33.9–32.2ºC (93–90ºF)	Violent shivering persists, difficulty speaking, sluggish thinking, amnesia starts to appear, gross muscle movements sluggish, unable to use hands, stumbles frequently, difficulty speaking, signs of depression, withdrawn
Severe Hypothermia	32.2–30ºC (90–86ºF)	Shivering stops, exposed skin blue or puffy, muscle coordination very poor, inability to walk, confusion, incoherent/irrational behavior, but may be able to maintain posture and appearance of awareness
	30–27.8ºC (86–82ºF)	Muscle rigidity, semiconscious, stupor, loss of awareness of others, pulse and respiration rate decrease, possible heart fibrillation
	27.8–25.6ºC (82–78ºF)	Unconscious, heartbeat and respiration erratic, a pulse may not be obvious
	25.6–23.9ºC (78–75ºF)	Pulmonary edema, cardiac and respiratory failure. Death may occur before this temperature is reached.

HOT WORK

Hot Work

1. Responsibilities

1.1. Safety Program Administrators

1.1.1. The safety department will review hazards and incidents associated with welding, burning, and cutting; will develop training programs for welding, cutting, burning, and hot work operations; will perform health hazard evaluations; and will perform safety inspections of welding work areas and equipment.

1.2. Superintendents

1.2.1. Superintendents are responsible for worker and subcontractor compliance with OSHA standards and this policy

1.3. Foremen

1.3.1. Foremen are responsible to see that all work observed on the project is compliance with the same.

1.4. Permit Authorizing Individual (PAI)

1.4.1. The PAI will likely be the subcontractor's supervisor. The PAI is responsible for safe hot work activities, and will review the site-specific plan for flammable materials, hazardous processes, or other potential fire hazards that may be present or likely to be present in the work location. The PAI will ensure site protection from ignition of combustibles and/or flammables by the following means:

1.4.1.1. Ensure the work is located in an area free from combustibles and/or flammables.

1.4.1.2. If the work cannot be moved, ensure the combustibles and/or flammables are moved to a safe distance or are properly shielded against ignition.

1.4.1.3. Ensure hot work is scheduled such that operations that could expose combustibles to ignition are not started during hot work operations.

1.4.1.4. Ensure fire protection and extinguishing equipment is properly located at the site.

1.4.1.5. Ensure fire watch is available when required.

1.4.1.6. Where a fire watch is not required, the PAI will complete a final checkup one half hour after hot work operations end to detect and extinguish possible smoldering fires.

1.5. Hot Work Operator

1.5.1. The hot work operator is qualified and authorized by management and the PAI to perform hot work such as welding, cutting, burning, soldering, and other similar tasks.

1.5.2. The operator will handle the equipment safely according to manufacturer's recommendations and specifications.

1.5.3. The operator will obtain the PAI's approval before starting hot work operations.

1.5.4. The operator will immediately stop hot work operations if unsafe conditions develop and will notify the PAI for reassessment of the situation.

1.6. Fire Watch

1.6.1. Fire watch is performed by an individual trained in hot work. It includes monitoring the area for changing conditions, watching for fires, and extinguishing the fires if possible.

1.7. **Employee**

1.7.1. Before operating equipment, read and understand safety practices for the specific equipment being used.

1.7.2. Inspect all welding equipment daily prior to use.

1.7.3. Complete a hazard assessment prior to beginning work.

1.7.4. Wear required PPE.

1.7.5. Report unsafe conditions immediately to the supervisor.

2. Hazard Assessment

2.1. Welding and cutting processes can produce molten metal, sparks, slag, and hot work surfaces which can cause fire or explosion if assessments are not completed and precautions are not followed.

2.2. Flying sparks are the number one cause of fires and explosions in welding, cutting, and burning operations. Sparks can travel up to 35 feet from the work area. Sparks and molten metal can travel greater distances when falling. Sparks can pass through and/or become lodged in cracks, clothing, pipe holes, and other small openings in floors, walls, or partitions. Typical combustible materials inside buildings are wood, paper, rags, clothing, chemicals, flammable liquids and gases, dusts, etc. In addition, the building itself contains combustible materials such as floors, partitions, and roofs. Welding and cutting can cause explosions in spaces containing flammable gases, vapors, liquids, or dusts.

3. Fire Prevention

3.1. Whenever possible, relocate the work from the job site to the welding/maintenance shop. Welding and cutting operations are to be conducted in a separate, well ventilated room with a fire-retardant floor.

3.2. When it is not possible to relocate work to the welding shop, remove combustible materials around the work area or move the work to a location well away from combustible materials.

3.3. Protect combustibles with covers made of fire-resistant materials.

3.4. When possible, enclose the work area with portable, fire-resistant screens.

3.5. When needed, have a qualified firewatcher in the work area during the welding and cutting work and for at least 30 minutes after hot work is finished.

3.6. Fire extinguishers that are appropriate for the type of possible fires must be maintained and available at the work area.

3.7. Welding or cutting is not permitted in or near rooms containing reactive, toxic, flammable, or combustible liquids, vapors, gases, or dusts.

3.8. Do not apply heat to a work piece covered by an unknown substance or coating that can produce flammable, toxic, or reactive vapors when heated.

3.9. Provide safety supervision for outside contractors conducting hot work. Inform contractors about site-specific hazards, including the presence of flammable materials.

3.10. During operation where welding and cutting operations may pose significant fire hazards on construction projects, the hot work permit system should be utilized.

3.11. Fire prevention is each employee's the responsibility. It is important to maintain proper housekeeping and material storage practices.

Hot Work

4. Hot Work Permit

4.1. Hot Work Permissible Areas

4.1.1. Hot work involves burning, welding, cutting, or similar operations that are capable of causing fires or explosions. Therefore, hot work will be performed in areas that are or have been made fire safe. Hot work will be completed in either designated areas or permit-required areas.

4.1.2. A permit-required area will be an area that is made safe from fires by removing and/or protecting combustibles from ignition sources.

4.2. **Non-Permissible Areas:** Non-permissible areas are locations that cannot be made safe for hot work, and hot work is not permitted in these locations. An example is near closed tanks that contain or have contained flammable liquids.

4.3. Hot Work Permit Process

4.3.1. Prior to the start of hot work operations in a permit-required location, a written hot work permit issued by the PAI is required.

4.3.2. Date the permit being issued. A permit is only valid for one day of work. See Appendix A for Hot Work Permit.

4.3.3. Document the location, including building/floor/level, where hot work will be completed.

4.3.4. Document the type of work to be performed (i.e. overhead MIG welding).

4.3.5. Welding, cutting, burning, or any other hot work equipment being used will be inspected and must be in satisfactory operating condition.

4.3.6. Combustible materials on the floor will be swept clean from the area where work is being performed. Combustible floors will be protected by noncombustible or fire-retardant shields.

4.3.7. Combustibles will be relocated from the area where work is being performed. If relocation is not practical, combustibles will be protected with fire-retardant covers and/or shielded with effective guards or curtains. Fire-retardant cover edges at the floor will be tight so sparks are prevented from going under them.

4.3.8. Protect openings or cracks in walls, floors, or ducts with fire-retardant or a non-combustible material so the passage of sparks to adjacent areas will not occur.

4.3.9. When hot work is completed near walls, partitions, ceilings, or roofs of combustible construction materials, ensure fire-retardant shields and/or guards are provided to prevent fire ignition.

4.3.10. When hot work is completed on a wall, partition, ceiling, or roof, utilize precautions to prevent ignition of combustibles on the other side by relocating combustibles. If it is not possible to relocate combustibles, provide a fire watch on the opposite side of the work being completed.

4.3.11. Hot work will not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls/partitions of combustible, sandwich-type panel construction.

4.3.12. Hot work performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles will not be performed if the work could cause ignition by conduction.

4.3.13. Fire extinguishers that are appropriate for the type of possible fires must be maintained and available at the work area.

4.3.14. If hot work is completed in close proximity to a sprinkler head, local fire codes will be followed.

4.3.15. Special precautions will be taken to avoid accidental activation of automatic fire detection or suppression systems (for example smoke detection, special extinguishing systems, or sprinklers).

4.3.16. Personnel working near welding, cutting, and burning will be protected against heat, sparks, slag, and so on.

5. Ventilation

5.1. Ventilation will be provided to ensure exposures to hazardous concentrations of airborne contaminants are below the allowable exposure limits.

5.1.1. Welders should practice keeping their head out of the fume plume. Repositioning work and/or your head may help prevent your breathing smoke and fumes. Do not breathe the fumes.

5.1.2. Adequate ventilation for all welding, cutting, and heating operations will be provided. Adequate ventilation can be obtained through natural and/or mechanical means.

5.1.2.1. Natural ventilation occurs with the movement of air through a workplace by natural forces. Roof vents, open doors, and windows provide natural ventilation. A building's layout can affect the airflow in the welding area. Natural ventilation can be acceptable for welding operations if the contaminants are kept below the allowable exposure limits.

5.1.2.2. Mechanical ventilation occurs with movement of air through a workplace by a mechanical device such as a fan. Mechanical ventilation can be more reliable and effective than natural ventilation. When using mechanical ventilation, apply the following:

5.1.2.2.1. Locate the hood as close to the work as possible.

5.1.2.2.2. Position the hood to draw the plume away from the breathing zone.

5.1.2.2.3. Curtains may be used to direct airflow.

6. Personal Protective Equipment

6.1. Body Protection

6.1.1. Wear clothing that provides coverage and is made of materials that minimize skin burns caused by sparks, spatter, or radiation. Wear protective clothing made of natural materials.

6.1.2. Wear long sleeved shirts that will protect arms and neck from exposure and/or skin burns.

6.1.3. Wear leather aprons (leather or other material that protects against radiated heat and sparks), leggings, capes, and sleeves as needed for the hazards present.

6.1.4. Do not wear synthetic (man-made) fabrics; they may burn easily.

6.2. **Leg and Foot Protection**

6.2.1. Wear leather, high-topped boots that are in good condition. In some cases, steel-toed boots may be required.

6.2.2. In areas where heavy spark and slag may be present, use fire-resistant boot protectors and/or leather spats strapped around your pant legs and boot tops to prevent injury and burns.

6.2.3. Do not wear pants with cuffs. Wear the bottoms of your pants over the tops of your boots to keep out sparks and flying metal.

6.2.4. Do not tuck pant legs into your boots.

6.3. **Hand Protection**

6.3.1. Wear flame-resistant gloves or leather welder's gloves.

6.3.2. Wear dry, hole-free, insulated welding gloves in good condition.

6.4. **Hearing Protection**

6.4.1. Wear approved ear plugs or earmuffs when loud noise is present to protect your hearing and prevent hearing loss. Hearing protection may prevent sparks, spatter, and hot metal from entering your ears and causing burns.

6.5. **Respiratory Protection**

6.5.1. Approved respiratory protection (NIOSH approved respirators) will be used, and employee use of respirators must meet the Respiratory Protection Program requirements. See our Respiratory Protection Program for more information.

6.6. **Eye and Face Protection**

6.6.1. Welding, cutting, burning, and similar processes present hazards to the welder's eyes and face. The intense heat from arc rays and welding sparks may cause burns to the skin and eyes during electric welding and welding processes. PPE for the eyes and face is important and required for the welder and other personnel working near welding operations.

6.6.2. Electric arc welding and arc cutting requires helmets with filter lenses and cover lenses to be used by the operator as well as individuals in the immediate area viewing the arc.

6.6.3. Oxyfuel gas welding and cutting requires welding helmets with a filter lens with a minimum of shade #5 protection. However, the required protection may increase to shade #8 depending on the welding and cutting operation. Goggles or other approved eye protection will be worn by individuals in the work area during oxyfuel gas welding and cutting operations.

6.6.4. Other welding operations such as grinding will require safety glasses with side shields and/or impact safety goggles combined with a face shield. Equipment approved at the ANSI Z87+ level is required for protection against these hazards. The PPE should be stamped ANSI Z87+.

6.6.5. **OSHA Welding Lens Selector Guide:** The following is a guide for the selection of the proper shade numbers for welding and cutting eye protection. These recommendations may be varied to suit the individual's needs to protect against infrared and ultraviolet light.

Welding Operation	Shade No.
Shielded metal-arc welding: 1/16-, 3/32-, 1/8-, 5/32-inch electrodes	11
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 5/16 -, 3/8-inch electrodes	 12 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.

7. Tools and Equipment

7.1. Oxygen/Fuel Gas Apparatus

7.1.1. Never treat cylinders as empty. Store and handle cylinders as if they are full.

7.1.2. Store cylinders in dry, well-ventilated areas, in a vertical position. Utilize a chain or other device for holding them in place.

7.1.3. Only accept cylinders from supplier with valves that are capped.

7.1.4. A safety data sheet (SDS) should accompany delivered cylinders from suppliers. Ensure SDSs are provided, unless the SDS is already on file.

7.1.5. Keep cylinder caps in place except when cylinder is in use.

7.1.6. Replace the cylinder cap when the cylinder is not in use. "In use" means in the welding rig or cradle, secured in a vertical position.

7.1.7. Store gas cylinders a minimum of 20 ft. from sources of heat, flame, or fire.

7.1.8. Do not store cylinders in areas where the temperature will exceed 125° F.

7.1.9. Store oxygen cylinders at least 20 ft. from fuel gases or separate them with a wall at least five feet high having a one-hour fire rating.

7.1.10. Do not store cylinders near elevators, shafts, gangways, or stairways.

7.1.11. Do not store oxygen with other combustible materials, including petroleum-based products of any type, carbides, etc.

7.1.12. Contact between oxygen and any petroleum-based product can result in fire/explosion. It does not require heat!

7.1.13. Ensure that contents are marked on all cylinders.

7.1.14. Move cylinders using a special truck, a cylinder hand truck, a cart, or cylinder pallet.

7.1.15. Never drop, roll, skid, or puncture a gas cylinder.

7.1.16. Never force connections that do not fit.

7.1.17. Inspect the entire welding rig before use each day. Ensure there are no leaks. Perform a drop test.

7.1.17.1. Ensure that both the oxygen and fuel control valves on the torch handle are closed.

7.1.17.2. With the oxygen cylinder valve open, adjust the oxygen regulator to deliver a minimum of 20 PSIG (10kPa).

7.1.17.3. With the fuel cylinder valve open, adjust the fuel regulator to deliver a minimum of 10 PSIG (70kPa).

7.1.17.4. Close both the oxygen and fuel cylinder valves.

7.1.17.5. Turn the adjusting screws counterclockwise to relieve regulator pressure.

7.1.17.6. Observe the gauges on both regulators for a minimum of five minutes. If the gauge readings do not change, then the system is leak tight. If there is a leak, use an approved leak detection method to locate it.

(If the pressure drops during the drop test, perform a leak test to identify all leaks. Use an industry approved oil-free leak detection solution.)

7.1.18. Protect other workers and the public from welding light, flashes, sparks, slag, and molten metal with effective methods.

7.1.19. Ventilate welding operations from airborne contaminants created by the welding process. Natural and/or mechanical ventilation may be used depending on location and circumstances.

7.1.20. Light torches with strike or friction lighters only.

7.1.21. Purge or bleed each hose individually before lighting the torch for the first time each day.

7.1.22. Do not use overly worn or patched hoses.

7.1.23. Wear proper PPE during all welding/burning operations.

7.2. **Regulators and Gauges**

7.2.1. Pressure-reducing regulators or reducing valves will be installed on all compressed gas cylinders to maintain an even flow of gas to the torch.

7.2.2. Use only regulators listed as registered with Underwriters Laboratories (UL) or Factory Mutual Laboratories or the approved regulator for the specific gas.

7.2.3. Flashback arresters will be installed on all regulators.

7.2.4. Use approved regulators for the specific gas. i.e., do not use acetylene gauge on oxygen cylinder.

7.2.5. Never use an oxygen hose on a fuel cylinder or vice versa.

7.2.6. Use tools designed and made for cylinders and regulators. Do not use pipe wrenches or pliers on cylinders and regulators.

7.2.7. Regulators equipped with a hand wheel shall not be turned by hitting with a hammer or a wrench.

7.2.8. Do not repair a regulator unless authorized, qualified, and certified.

7.2.9. Watch the indicator on the regulator after closing torch valves. If the needle creeps upward, replace the regulator immediately.

7.2.10. Leave valve wrenches connected to cylinder valves while welding.

7.2.11. Cylinder valves are to be opened only when actively in use.

7.2.12. Do not force cylinder valves open or closed.

7.3. **Acetylene**

7.3.1. Acetylene creates flame of about 6,000° when burned with oxygen.

7.3.2. Store acetylene cylinders vertically.

7.3.3. Assure the acetylene regulator is not allowed to discharge gas flow greater than 15 psi.

7.4. **Oxygen**

7.4.1. Never use combustible oil or grease to lubricate oxygen cylinder fittings or valves.

7.4.2. Only use oxygen cylinder fittings or valves. Oxygen regulators will be equipped with a safety release valve to prevent flying parts if diaphragm ruptures.

7.4.3. Never use oxygen to operate pneumatic tools, to blow out lines, or to clean or dust off clothing.

7.5. **Connections and Hoses**

7.5.1. Replace leaking, broken, torn, burned, and worn-out hoses.

7.5.2. Test for leaks by submerging hose sections in water or by painting soapy water on the suspected area and looking for bubbles.

7.5.3. Use approved fittings only.

7.5.4. Never use any petroleum-based products to make connections.

7.5.5. Attach flashback arresters at either or both ends of the hose. Follow manufacturer's specifications.

7.5.6. Use the proper type and size of hose for the job.

7.5.7. Use the correct color coding for hoses:

7.5.7.1. **Green** for oxygen

7.5.7.2. **Red** for acetylene

7.5.7.3. **Black** for air/inert gas

7.5.8. Place hoses where damage by other workers, tools, machines, or vehicles will not occur.

7.6. **Electric Arc Welding**

7.6.1. Inspect the lead cable and work cable daily.

7.6.2. Inspect electrode holders for loose and/or damaged connections.

7.6.3. Only splice a lead for repair in accordance with the manufacturer's instructions if you are authorized and qualified to do so. Never use tape.

7.6.4. Never splice a weld-lead within 10 ft. of holder; replace the lead.

7.6.5. Never coil the electrode cable around your body.

7.6.6. Always review the composition of fluxes, welding rods, and coatings. Review the SDSs to identify safety and health requirements.

7.6.7. Appropriately protect yourself from exposure to toxic substances.

7.6.8. Ground both the frame of the welder and the metal you are welding.

7.6.9. Do not attach the ground to pipes carrying gas or flammable liquids or to electrical conduits. Ground as close to the machine as possible.

7.6.10. Do not weld in wet conditions unless you take proper precautions.

7.6.11. Do not allow metal parts in contact with the electrode to touch your skin, damp clothing, or wet clothing. Make sure your work gloves are dry at all times, and test regularly.

7.6.12. Do not cool electrode holders by using water.

7.6.13. Always disconnect the welder from the power source when changing the electrodes.

8. Training

8.1. A competent person will cover the following:

8.2. Procedures, practices, and tasks employees are expected to perform

8.3. Instructions for safe use, operation, and maintenance of tools, equipment, and machinery

8.4. Manufacturer's operating and maintenance instructions, warnings, and precautions

8.5. Hazards associated with expected tasks and ways to prevent or control the identified hazards

8.6. Retraining is required if the employee fails to demonstrate the knowledge and experience to safely perform the expected tasks.

8.7. Welders' will be evaluated on their ability to adequately perform the expected tasks prior to allowing them to work independently.

INCIDENT INVESTIGATION AND REPORTING

Incident Investigation and Reporting

Incidents are any events that cause injury, material damage, or loss of productivity. If something or someone gets hit or hurt, its and incident. Reporting of all incidents is required within 24 hrs.

A close call is defined as anytime that, barring a slight change, someone or something could have been hit or hurt.

1. Responsibilities

1.1. **Safety Program Administrator/Safety Team Member**

1.1.1. Assists Superintendent and Foreman on the scene conduct a thorough investigation of all incidents and near misses that rise to the level of a learning opportunity.

1.2. **Superintendent**

1.2.1. Assures that a complete investigation is completed. See below for required information to complete an investigation.

1.3. **Foremen**

1.3.1. Assists the Superintendent in the investigation process.

1.4. **Employee**

1.4.1. Reports all incidents and close calls.

1.4.2. Participates in investigation providing information and statements.

1.5. **Safety Committee**

1.5.1. Reviews all incidents and near misses looking for trends and improvement opportunities.

2. Incident/Accident S.O.P.

2.1. If an injury has occurred, attend to injuries

2.2. Call the safety program administrator

2.3. If an injury has occurred print the **Injury Investigation Form**

2.4. If the incident involves property or equipment damage, or is a near miss, print the Non-**Injury Incident or Close Call Investigation Form**

2.5. Identify witnesses

2.6. Take initial pictures of the scene

2.7. Once the safety team arrives

2.7.1. Continue assisting in the completion of the investigation

2.7.2. Sign off on the form

2.7.3. Upload to smartsheet Incident/Close Call Log

3. Investigation Tips

3.1. **Interviewing the Victim**

3.1.1. Interviewing the incident/accident victim is probably the most important mechanism of gathering facts about the incident.

3.1.1.1. Be positive.

3.1.1.2. Do not assign blame.

3.1.1.3. Ask open ended questions.

3.1.1.4. Review the incident/accident facts as known with the victim.

3.1.1.5. Take notes; record the incident/accident victim's words during the interview.

3.1.1.6. Review recorded interview facts with the victim to ensure facts are recorded correctly.

3.1.1.7. If facts seem unreasonable, consider a second interview with the victim. This will allow the victim time to reflect on the occurrences.

3.1.1.8. Ask the victim for suggestions to prevent reoccurrence of the incident/accident.

3.1.1.9. Ask the victim who else may be helpful to interview.

3.2. **Interviewing Accident Witnesses**

3.2.1. Witnesses are individuals at the incident/accident scene, and individuals with knowledge of the incident/accident circumstances.

3.2.1.1. Interview witnesses promptly.

3.2.1.2. Interview witnesses separately.

3.2.1.3. Assure witnesses that investigations are a positive tool to prevent a reoccurrence of the incident.

3.2.1.4. Do not interrupt the witness, unless it is to gain clarity.

3.2.1.5. Do not assign blame.

3.2.1.6. Take notes; record the accident/incident witness' words during the interview.

3.2.1.7. Have witnesses draw or note their location at the times of the incident.

3.2.1.8. Ask the witness for suggestions to prevent reoccurrence of the incident/accident.

3.2.1.9. Ask the witnesses for other potential witnesses to interview.

3.3. **Investigation of the Scene – Document Evidence**

3.3.1. Try to keep the scene untouched. If that is not possible, photograph or video as soon as possible after the incident. Label all videos and photographs (record dimensions).

3.3.2. Identify conditions at the scene:

3.3.2.1. Housekeeping

3.3.2.2. Work environment or layout

3.3.2.3. Floor or surface condition

3.3.2.4. Lighting or visibility

3.3.2.5. Noise or distractions

3.3.2.6. Equipment guarding

3.3.2.7. Air quality, temperature, or weather

3.3.2.8. Equipment condition or malfunction history

3.3.2.9. Periodic rule or procedure violation

3.3.2.10. Training, experience, or supervision

3.3.2.11. Alcohol or drug abuse

3.3.2.12. Employee morale or attitude

3.3.2.13. Health or safety record

3.4. **Incident/Accident Reenactment**

3.4.1. If the causes of the incident/accident are unclear, a reenactment may be necessary.

3.4.2. Take precautions to prevent a reoccurrence!

3.4.3. If appropriate, incident/accident victims/witnesses may be utilized in the reenactment.

3.4.4. Utilize information gathered from investigation of the scene to create the reenactment.

3.5. **Incident/Accident Reconstruction**

3.5.1. If the victim is unable to be interviewed and there are no witnesses, an incident/accident reconstruction may be necessary.

3.5.2. Take precautions to prevent a reoccurrence!

3.5.3. Assistance from an outside expert or consultant may be required.

3.5.4. Utilize information gathered from investigation of the scene to create the reenactment.

4. Incident/Accident Report

4.1. **Description of Incident/Accident**

4.1.1. Briefly describe the incident and the injury and/or property damage.

4.1.2. State facts.

4.1.3. Location of the occurrence.

4.1.4. Time and date of the occurrence.

4.1.5. Workers' injuries.

4.1.6. Estimated lost work time due to the incident/accident.

4.1.7. Damaged equipment.

4.1.8. Lost production time due to damaged equipment.

4.2. **Employee Remarks**

4.2.1. Provide the employee's description/analysis of the incident/accident.

4.2.2. Provide the employee's suggestions to prevent reoccurrences.

4.2.3. If the employee is unable to provide remarks, leave a blank to be filled in later.

4.3. **Unsafe Acts and/or Conditions Contributing to the Incident/Accident**

4.3.1. To be completed by the supervisor if possible.

4.3.2. List all causes that may have contributed to the incident/accident.

4.4. **Corrective Actions**

4.4.1. Identify actions and schedules for items to be completed.

4.4.2. Identify responsible party for the actions to be completed.

4.4.3. Identify cause or causes responsible for the incident/accident. Causes stated as "employee was careless" (training/supervision), "employee is accident prone" (training), "employee doesn't follow directions" (training/supervision), etc. should not be accepted; root causes have not been discovered. Unsafe acts must be better defined.

4.4.4. Methods of Follow Up

4.4.4.1. Select and recommend corrective actions with possible solutions using the following prioritization hierarchy. In hierarchy of hazard control, the most desirable solutions come from the first level, with the following levels offering increasingly less desirable options.

4.4.4.1.1. **Elimination:** remove the hazard from the workplace

4.4.4.1.2. **Substitution:** replace a hazardous substance or activity with a less hazardous one

4.4.4.1.3. **Engineering controls:** provide guards, ventilation, or other equipment to control the hazard

4.4.4.1.4. **Administrative controls:** develop policies and/or procedures to ensure safe work practices

4.4.4.1.5. **Personal protective equipment:** use respirators, earplugs, safety glasses, etc.

5. Determine the Root Cause: Five Whys

5.1. By repeatedly asking the question "why" (five is a good rule of thumb), you can peel away the layers of symptoms that can lead to the root cause of a problem. Very often the ostensible reason for a problem will lead you to another question. Although this technique is called Five Whys, you may find that you will need to ask the question fewer or more times than five before you find the issue related to a problem.

5.2. Benefits of the Five Whys

5.2.1. Helps identify the root cause of a problem

5.2.2. Determines the relationship between different root causes of a problem

5.2.3. Is one of the simplest tools; easy to complete without statistical analysis

5.3. When Is Five Whys Most Useful?

5.3.1. When problems involve human factors or interactions.

5.4. How to Complete the Five Whys

5.4.1. **Step 1:** Write down the specific problem. Writing the issue helps you formalize the problem and describe it completely. It also helps a team focus on the same problem.

5.4.2. **Step 2:** Ask why the problem happens and write the answer down below the problem.

5.4.3. **Step 3:** If the answer you just provided doesn't identify the root cause of the problem that you wrote down in Step 1, ask why again and write that answer down.

5.4.4. **Step 4:** Loop back to Step 3 until the team is in agreement that the problem's root cause is identified. Again, this may take fewer or more times than five whys.

5.4.5. **Incident:** While repairing a press, Bob suffered an injury to his finger when it started unexpectedly.

5.4.6. **Why** was Bob's finger injured? The ram on the press he was repairing unexpectedly came down.

5.4.7. **Why** did the ram on the press come down? Another employee started up the machine without realizing Bob was in the danger zone. Bob had shut down the machine, but not performed an energy lockout so there was still power to the ram.

5.4.8. **Why** didn't Bob perform an energy lockout? The machine wasn't locked out because there is no company lockout/tagout program. Bob has never been trained on hazardous energy control because management thought it was too expensive.

5.4.9. **Root causes:** Lack of lockout/tagout program, lack of employee training on hazardous energy control and poor safety leadership as demonstrated by unwillingness to spend money on employee safety training.

INJURY MANAGEMENT

Injury Management

1. Aches and Pains Protocol

1.1. If a worker communicates an ache or pain that is a potential issue.

1.1.1. Sore knee, back or other body part due to an old injury or overuse due to the work they are doing.

1.1.1.1. Call the Safety Program Administrator.

1.1.1.2. Call the onsite medical service.

1.1.1.3. Have them diagnosed.

1.1.1.4. Change their work for a time until they recover.

1.1.1.5. Require and follow up on the worker to ensure they are doing what the onsite medical provider prescribes.

2. Injury Management Protocol

2.1. If the injury is serious or a possible fatality (refer to Crisis Management Plan).

2.1.1. Follow the Crisis Plan.

2.2. For all others call the Safety Administrator first.

2.3. If First Aid will remedy.

2.3.1. Administer First Aid.

2.3.2. Fill out investigation.

2.3.3. Upload.

2.4. If unsure or in need of onsite medical service.

2.4.1. Call the onsite medical service.

2.4.2. Fill out investigation.

2.4.3. Upload.

2.5. If hospital or urgent care is needed.

2.5.1. Printout 801.

2.5.2. Have the employee fill out their portion and wait for the arrival of the safety team.

2.5.3. Complete the investigation (see Incident Investigation Section).

2.5.4. Upload the investigation.

LADDERS AND STAIRWAYS

Ladders and Stairways

1. Stairways

1.1. Stairways shall be kept clear of clutter and all objects that could cause someone to trip or lose their balance while climbing stairs. Boxes, cords, hoses, garbage, and/or waste materials should not be stored on any stairway.

1.2. All stairways shall have rigid handrails mounted to help ensure safe use.

1.3. A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches (48 cm) or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

1.4. Adequate lighting shall be provided in all stairways/stairwells.

1.5. Stair treads shall be constructed of non-slip materials or have a non-slip surface provided.

1.6. All personnel shall be prohibited from carrying heavy/awkward objects, which could cause imbalance or reduced line of sight, up or down stairs.

1.7. All personnel shall be required to report unsafe stairways to their supervisor immediately.

1.8. Unsafe stairways shall be cordoned off and not used until the condition is corrected.

2. Ladders (Including Job-Made Ladders) General Rules

2.1. Ladders will always be used last.

2.2. Only Type IAA, IA, I, and II ladders may be used in the workplace.

2.3. All manufacturer warning labels must be legible and affixed to the ladder.

2.4. Ladders must be maintained free of oil, grease, and other slipping hazards.

2.5. Ladders must not be loaded beyond the maximum intended load for which they were built or beyond their manufacturer's rated capacity.

2.6. Ladders must be used only on stable and level surfaces, unless secured to prevent accidental movement.

2.7. Ladders must be used only for the purpose for which they were designed.

2.8. Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Slip-resistant feet must not be used as a substitute for the care in placing, lashing, or holding a ladder on slippery surfaces.

2.9. Ladders placed in areas such as passageways, doorways, driveways, or areas where they may be displaced by workplace activities or traffic must be secured to prevent accidental movement, or a barricade must be used to keep traffic or activities away from the ladder.

2.10. Ladders must not be moved, shifted, or extended while in use.

2.11. Ladders must have nonconductive side rails if they are used where the worker or the ladder could contact exposed, energized, electrical equipment.

2.12. Ladders must be inspected by a competent person for visible defects on a periodic basis and after any incident that could affect their safe use.

2.13. When ascending or descending a ladder, employees must face the ladder.

2.14. Three points of contact must be maintained while working from, ascending and descending.

2.15. An employee on a ladder must not carry any object or load that could cause the worker to lose balance and fall.

Ladders and Stairways

3. Extension Ladders

3.1. Never work of a leaned extension ladder unless there is no other option.

3.2. When portable ladders are used for access to an upper landing surface, the ladder must be secured and the side rails must extend at least three feet (.9 m) above the upper landing surface, or have a grasping device such as a grab rail provided to assist workers in mounting and dismounting the ladder.

3.3. A ladder extension or grasping device must not deflect under a load that would cause the ladder to slip off its support. The ladder needs to be secured.

3.4. Non-self-supporting ladders (straight and extension ladders) must be used at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder. Use the ratio of "one out for every four up" to ensure proper angle of ladder. Fixed ladders must be used at a pitch no greater than 90 degrees from the horizontal, measured from the back side of the ladder.

3.5. The area around the top and bottom of ladders must be kept clear for safe access and egress.

4. Step Ladders

4.1. Never work on a step ladder leaned against a wall.

4.2. The top two steps of a stepladder must not be used unless designed for such.

4.3. Cross bracing on the rear section of stepladders must not be used for climbing, unless the ladders are designed for and provided with steps for climbing on both front and rear sections.

4.4. All four legs must be on the ground.

4.5. The stabilizers must be locked down.

5. Defective Ladders

5.1. Portable ladders with structural defects such as broken or missing rungs, cleats, or steps; broken or split rails; corroded components; or any other defects must immediately be marked defective or tagged with "Do Not Use" or similar language and removed from service until repaired.

5.2. Fixed ladders with structural defects must be removed from service until repaired.

5.2.1. Defective fixed ladders are considered removed from use when they are:

5.2.1.1. Immediately tagged with "Do Not Use" or similar language,

5.2.1.2. Marked in a manner that identifies them as defective, or

5.2.1.3. Blocked (such as with a plywood attachment that spans several rungs).

5.3. Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use. Always consult the manufacturer's recommendations and specifications prior to repairing any ladder.

6. Training Requirements

6.1. Under the provisions of the standard, employers must provide a training program for each employee using ladders and stairways. The program must enable each employee to recognize hazards related to ladders and stairways and to use proper procedures to minimize these hazards. For example, employers must ensure that each employee is trained by a competent person in the following areas, as applicable:

6.1.1. The nature of fall hazards in the work area.

6.1.2. The proper construction, use, placement, and care in handling of all stairways, ladders, and any other access system used at jobsite or facility.

6.1.3. The maximum intended load-carrying capacities of ladders used. In addition, retraining must be provided for each employee, as necessary, so that the employee maintains the understanding and knowledge acquired through compliance with the standard.

WORKING WITH LEAD

Working with Lead

Areas where information indicates an employee's exposure may equal or exceed the Action Limit of 30µg/m3 or Exposure Limit of 50µg/m3, additional requirements may be necessary. Future exposure monitoring will be conducted as conditions warrant by contacting the Site Superintendent, who will schedule the monitoring through:

- Insurance carrier industrial hygienists
- OR-OSHA Consultative
- An independent industrial hygiene company

1. Responsibilities

1.1. Program Administrator

1.1.1. The administrator will provide annual lead training.

1.1.2. The administrator will review all lead and asbestos reports prior to starting a renovation project.

1.1.3. The administrator will schedule training specifically as needed.

1.2. Project Manager

1.2.1. PM will purchase and contract or acquire a copy of the lead and asbestos survey.

1.3. Superintendent/Foremen

1.3.1. Field leaders are responsible to ensure that all work on surfaces containing lead are completed within this program and in accordance with OSHA and EPA rules.

2. S.O.P

2.1. Obtain a building survey. It must contain the following:

2.1.1. Location of lead-based paint.

2.1.2. The amount of lead in the paint.

2.1.3. Areas where we will impact the paint.

3. Tasks Requiring a Site-Specific Plan

3.1. Any task which may disturb the lead-based paint will require a site-specific lead plan. This includes these activities:

3.1.1. Demolition or salvage of building materials.

3.1.2. Removal or encapsulation materials containing lead.

3.1.3. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead or materials containing lead.

3.1.4. Installation of products containing lead.

3.1.5. Lead contamination/emergency cleanup.

3.1.6. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed.

3.1.7. Maintenance operations associated with the construction activities described in this paragraph.

3.2. In addition to a site-specific plan, an applicable compliance plan, job safety analysis (JSA), or job hazard analysis (JHA) will need to be performed prior to the work activity.

3.3. Based upon the tasks being performed, the compliance plan and JHA/JSA may require:

3.3.1. Description of the activity.

3.3.2. Description of how compliance will be achieved.

3.3.3. A report on the technology considered in meeting the exposure limits.

3.3.4. Supporting air monitoring data or plans for an exposure assessment.

3.3.5. Scheduled implementation for the program.

3.3.6. Methods to notify others onsite, including occupants, contractors, and subcontractors.

3.3.7. Respiratory protection.

3.3.8. Protective clothing.

3.3.9. Engineering and work practice controls.

3.3.10. Signage.

3.3.11. Housekeeping procedures.

3.3.12. Hygiene facilities and practices (change areas, showers, eating, hand washing stations).

3.3.13. Medical surveillance.

4. Training

4.1. The program administrator will provide training annually.

4.2. Prior to exposure lead, employees will be trained in:

4.2.1. Hazard Communication (1910.1200), reproductive toxicity, CNS effects, kidney effects, blood effects, and acute toxicity.

4.2.2. The content of the OSHA standard for lead (1926.62).

4.2.3. The nature of operations which could result in exposure.

4.2.4. Respiratory protection.

4.2.5. The purpose and description of a medical surveillance program.

4.2.6. Engineering controls and work practices.

4.2.7. Compliance plan.

4.2.8. Instructions regarding chelating agents.

4.2.9. Employee's rights to access records (1910.1020).

4.3. Documentation of initial and annual training will be maintained on file by the Safety Program Administrator.

4.3.1. Description of how compliance will be achieved.

4.3.2. A report on the technology considered in meeting the exposure limits.

4.3.3. Supporting air monitoring data or plans for an exposure assessment.

4.3.4. Scheduled implementation for the program.

4.3.5. Methods to notify others onsite, including occupants, contractors, and subcontractors.

4.3.6. Respiratory protection.

4.3.7. Protective clothing.

4.3.8. Engineering and work practice controls.

4.3.9. Signage.

4.3.10. Housekeeping procedures.

4.3.11. Hygiene facilities and practices (change areas, showers, eating, hand washing stations).

4.3.12. Medical surveillance.

5. Rules and Jurisdictions

5.1. OSHA rules apply for all employees who are working with lead-based paint.

5.2. Environmental Protection Agency (EPA) has additional rules for public buildings and childcare facilities with children under age six.

5.3. Oregon Department of Environmental Quality (DEQ) has rules that apply to disposal of debris and wastewater.

5.4. The Oregon Health Division and Housing and Urban Development (HUD) also have similar but separate rules for their respective jurisdictions.

5.5. In addition, there may be local county or city agencies that may have their own lead-based paint regulations.

LOCKOUT - TAGOUT

Lockout/Tagout: Control of Energy

The company will never lockout or tag out in panels. Electricians will always complete this work.

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Responsible to develop and manage the overall policy

1.1.2. Responsible for providing annual instruction on the lockout/tagout procedures and the requirements of this program.

1.2. Superintendents

1.2.1. Responsible for providing onsite instruction on the lockout/tagout procedures and requiring subcontractors to submit lock-out/tag documentation.

1.3. Foremen

1.3.1. Responsible for to confirm that all subcontractor work involving hazardous energy has been called out on their PTP and that work is in compliance with our policy and their PTP.

1.4. Employees

1.4.1. Visually confirm that all energy controls are in place prior to working.

2. Purpose

2.1. The company has established this lockout/tagout program to provide the maximum protection to our employees whenever machines or equipment must be isolated from energy sources, and to prevent unexpected energization, start-up, and/or release of stored energy that could cause injury.

2.1.1. The primary method of hazardous energy control will be accomplished by utilization of this lockout/tagout program. This program is intended to meet or exceed current regulatory minimum requirements.

2.1.2. Employees involved in the installation, maintenance, repair, or servicing of equipment that requires the bypassing of guards are required to follow this policy. Those involved will be instructed in the safety significance of the lockout procedures to follow.

2.1.2.1. Each authorized employee will know all the energy sources and processes within the equipment and machinery. All sources of energy are covered under the procedures of this program, including electrical, mechanical, hydraulic, gravity, kinetic, energy, pneumatic, chemical, thermal, and other energy sources.

2.1.2.2. When repairing and servicing cord and plug electrical equipment, the power cord must be pulled from the energy source prior to repair. If the plug remains under the exclusive control of the employee performing the servicing and there are no other energy sources (or as mentioned above), no additional lockout/tagout procedures are required.

2.1.3. **Note:** Electrical work is covered on the electrical standards, which requires the similar type of lockout procedure with several exceptions. Live parts must be de-energized unless it can be demonstrated that there are additional or increased hazards or is infeasible due to equipment design or operational limitations. These procedures may only be used by employees qualified, trained, and authorized to by the company to do so.

2.1.4. **Examples:**

2.1.4.1. Increased or additional hazards: interruption of life support equipment, deactivation of emergency alarm systems

2.1.4.2. Infeasibility due to equipment design: testing on electric circuits that can only be performed with the circuit energized

3. Lockout/Tagout S.O.P.

3.1. All equipment energy sources capable of being locked out during construction servicing, repair, or maintenance will be identified and locked and tagged-out to prevent accidental or inadvertent operations which could cause injury.

3.2. Energy sources may include any of the following: electrical, pneumatic, hydraulic, stored energy (gravity, springs), thermal, fluid flow, pressure, all geothermal piping, and gasoline/diesel driven machines.

3.3. Equipment energy sources not capable of being locked out will be isolated and then tagged out to inform all others of the safety procedure in use and to ensure that no operation of the equipment is permitted.

3.4. Some equipment is not capable of being locked out, such as older power panel installations. (New lockout devices are regularly designed and available for purchase.) Utilize tagout alone when there is not a lockout system or device.

3.5. Typical conditions requiring lockout/tagout devices include:

3.5.1. Any time repairs, servicing, and/or changes are being done on machines or equipment, and the safeguards are bypassed. When working on electrical circuits in which the employee could come into contact with hazardous energy sources (mechanical, pneumatic, hydraulic, or stored energy).

3.5.2. When working on systems that contain hazardous substances or high-pressure lines, the systems should be clearly marked. Valves in the system should be capable of being locked out. In the case of high-pressure lines, there should be a means of safely relieving pressure in blocked sections.

3.6. No employee shall attempt to operate any switch, valve, or other energy isolating device bearing a lockout/tagout device.

3.7. Lock securing switch levers to prevent activation of electrical circuits or equipment where work is being completed. If the system is not capable of being locked out, apply a tagout that is securely fastened to the disconnect lever or at the immediate area to warn of the ongoing procedure.

3.8. Other basic controls may be needed to control the type(s) of energy present:

3.8.1. **Hydraulic energy:** close valve and bleed offline or block the device.

3.8.2. **Air pressure:** close valve and bleed off pressure from line prior to working on the device. Note: some valves open when they lose pressure, which can cause hydraulic or other liquid flows that could be hazardous to employees. These valves must be isolated and controlled.

3.8.3. **Springs:** attach a hold-down device or leave in open position where no stored energy is present.

3.8.4. **Fluid flow – water pressure:** ensure proper gate devices are used that hold the back pressure or drain lines so no fluid pressure is present.

4. Sequence for a Lockout/Tagout Procedure

The lockout/tagout procedure must be conducted in the following manner. No deviations will be tolerated.

4.1. The authorized employee shall notify the affected employees that the lockout/tagout system is going to be utilized.

4.2. If a particular piece of equipment is operating, it must be shut down by the normal stopping procedure, such as depressing the stop button or opening the switch. Some equipment has detailed procedures that need to be followed by trained employees.

4.3. Once the lockout/tagout device is in place, the authorized person(s) shall lock out and tag out the energy isolating device of the equipment or machines by using individually keyed locks. These lockout/tagout devices are assigned to each employee as part of his/her tools, assigned by a supervisor, or attained from our job site lockout center on an as needed basis. Locks are individually keyed and meet all requirements of governing codes for lockout/tagout. Authorized employees may have need of multiple lockout hardware for the job being performed. **Note:** each authorized employee will place their own lock at the energy lockout location.

4.4. After ensuring that no personnel are exposed, the authorized person(s) shall complete another check to make sure that all of the energy sources have been disconnected. The type of verification testing will depend on the type of equipment or electrical installation. Equipment may be tested by trying to operate it by turning on the controls.

4.5. The authorized employee(s) must operate the switch, valve, or other energy isolating device to make sure the equipment is isolated from its energy source. Stored energy, such as the energy found in springs, rotating fly wheels, hydraulic system, compressed air, or gas lines must be dissipated or restrained by repositioning, blocking, or bleeding down.

CAUTION: Return operating controls to "neutral" or "off" position after test.

4.6. Most of the electrical disconnects operating various pieces of equipment can be locked out; however, if other equipment energy requiring control cannot be locked out, then a tagout device will be used. The tagout device must be attached on the energy isolating device. The tag must clearly indicate that the operation or start-up of the energy isolating device from the safe or off position is prohibited.

5. Restoring Operating Equipment to Normal Operational Status

5.1. When the authorized employee(s) has completed their work, then the lockout device and tag can be removed. The following procedure will be followed during that process:

5.1.1. The authorized person(s) shall inspect the work area to make sure that all the tools have been removed from the machine and to ensure that the machine or equipment components are operationally intact.

5.1.2. Check the work area to ensure that all employees have been safely positioned.

5.1.3. Notify all the affected employees that the equipment is to be restarted.

5.1.4. Remove lockout and tagout device.

5.1.5. Notify affected employees that the servicing or maintenance is completed, and the machine or equipment is ready for use.

6. Removal by Someone Other Than the Person That Applied the Lock

6.1. **Note:** Removal of a safety lockout or tagout device by any person other than the authorized employee, who applied it, may only be done under the direction of the project manager, or in his absence, by the employee's supervisor, under the following procedure:

6.1.1. The project manager or supervisor will verify that the authorized employee who applied the device is not at the facility by checking with the immediate supervisor and co-workers.

6.1.2. The project manager or supervisor will contact the authorized employee, at home if necessary, to inform him that his lockout and/or tagout device needs to be removed. If the employee cannot return to remove the lock, then the supervisor will inform the person that the lock is being removed. The supervisor or lead person may then cut the lock off.

6.1.3. The project manager or supervisor must follow all the correct protocols for removal of a lockout or tagout as outlined above, and safely place the equipment back in service and then notify affected employees.

6.1.4. If all reasonable efforts have been made to contact the authorized employee, but the person was not reachable, the supervisor will ensure that the authorized employee upon return to work will know that his/her lock was removed, and that routine operation of the equipment is now occurring.

7. Procedure Involving More Than One Person

7.1. If more than one employee is required to lock out or tag out equipment, each shall place his/her own personal lockout device or tagout device on the energy isolating device(s). When an energy isolation device cannot accept multiple locks or tags, a multiple lockout/tagout device (hasp) is to be used, or a gang lock box containing the only key to the lock on the energy isolating device(s).

8. Contractors

8.1. When working with other contractors, their activities may create hazards which normally are not present to our regular employees.

8.2. A copy of our procedures will be given to that contractor, and a mutually agreed upon procedure concerning the lockout/tagout devices will be used to protect all employees and the contractor's workers. This coordination will help to ensure that all employees know the type of work to be performed, the location of the work, and protection measures.

8.3. The contractor's authorized employee(s) will be responsible to lock out/tag out all devices capable of locking or place an energy control tag on or as near the device as possible.

9. Periodic Inspection

9.1. Periodic inspection is intended to ensure that the energy control procedures are implemented properly, and the employees involved are familiar with their responsibilities. OSHA requires an inspection of lockout procedures be completed at least annually.

9.2. Management/safety program administrator will complete or assign the periodic inspection of the lockout/tagout program procedures to be performed at least annually to ensure that the procedure and the Oregon OSHA rules are being followed.

9.3. The periodic inspection will be performed by an authorized employee not involved in the energy control procedure being inspected. The inspector must determine three issues:

9.3.1. Whether the steps in the energy control procedure are being followed.

9.3.2. Whether the employees involved know their responsibilities under the procedure.

9.3.3. Whether the procedure is adequate to provide necessary protection and if changes are needed.

9.4. The inspector will observe and talk with the employees to make these determinations. These inspections are intended to provide immediate feedback and correct any inadequacies observed.

9.5. Supervisor/safety program administrator will make and keep a record of these inspections. OR-OSHA does not state a specific length of retention for the periodic inspections; therefore, our company will keep at least the most recent two inspections. The certification will have the following documented: date, equipment, the names of employees included in the inspection, and the person performing the inspection.

10. Employee Training

10.1. The purpose of training is to provide information to employees regarding the following:

10.1.1. Recognition of hazardous energy sources

10.1.2. Type and magnitude of energy available in the workplace

10.1.3. Function and purpose of the energy control program

10.1.4. To ensure that each worker has the knowledge and skill for the safe application, usage, and removal of energy blocking devices.

10.1.5. Methods and means necessary for energy isolation and control

10.2. Retraining will be conducted whenever a periodic inspection reveals or causes a reason to believe there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The retraining will reestablish employee proficiency and introduce new or revised control methods and procedures as necessary.

11. Documentation of Training

11.1. The supervisor/safety program administrator will document employee training has been accomplished and is being kept up to date. Verification of training will be kept and filed at the corporate office/safety department.

11.2. The training verification includes the employee's name, job title, employee signature, training date, signature line for the supervisor or qualified person conducting the training, their job position, and date.

11.3. The documentation shall be filed in the employee's training file.

WORKING AROUND MOLD

Working Around Mold

Mold belongs to a group of organisms called fungi. Because mold is found both indoors and outdoors, exposure to molds and other fungi and their spores is unavoidable. Mold can trigger allergic reactions or asthma attacks and may produce toxins and irritants—important reasons to prevent mold growth and clean up indoor mold contamination. Mold growth should be considered unacceptable because of potential health effects on building occupants and damage to buildings. Those who investigate, clean up, and repair mold damage should avoid exposing themselves and others to mold-laden dust.

We do not anticipate employees routinely being occupationally exposed to these hazards.

If you are exposed to mold, or when these hazards are identified, contact the program administrator.

Each project manager and/or project supervisor will ensure that each employee under their supervision meets or exceeds the protective measures included in this program.

1. Investigation of Possible Mold

1.1. The most important step is to identify the source(s) of moisture, which result in mold growth, and to take the necessary steps to make repairs to stop them. If you only clean up the mold and do not fix the moisture problem, then most likely the mold growth will recur. If the source of the moisture is related to a building failure or fault, such as a burst pipe or leaking roof, it is recommended that a professional contractor be consulted. In instances where the moisture source does not appear to be related to leaks, floods, structural faults, or rising damp, it is most likely due to condensation. If you do not see mold growth but smell a musty odor, mold may be growing underneath or behind water-damaged materials such as walls, carpeting, or wallpaper.

1.2. Common sources of excessive indoor moisture that can lead to mold problems include:

1.2.1. Flooding from surface waters (i.e., overflowing rivers) or from severe storms

1.2.2. Roof leaks from damaged or missing roofing materials, ice dams, or blocked gutters

1.2.3. Storm-driven rain through window frames, exterior walls, or door assemblies

1.2.4. Leaking pipes, sewer back-ups, or overflows

1.2.5. Damp basements or crawl spaces due to a high-water table (rising damp) or poorly managed rainwater drainage

1.2.6. Condensation on cold surfaces

1.3. Check building materials and spaces for visible mold and signs of moisture damage indicating a history of water leaks, high humidity, or condensation levels. Building ventilation systems should also be inspected. Basic precautions should be taken when investigating and evaluating mold and moisture problems.

1.3.1. Do not touch mold or moldy items with bare hands.

1.3.2. Do not get mold or mold spores in your eyes.

1.3.3. Do not breathe mold or mold spores; use personal protective equipment (PPE). At a minimum, use an N-95 NIOSH-approved respirator, gloves, and eye protection. (Employee must be in the Respiratory Protection Program.)

1.3.4. Contain or bag debris

1.4. Once the source of the moisture has been identified and fixed, decide if removing the mold from the affected areas is possible, and make recommendations to the safety team for further information. The size of the damaged area and the amount of possible mold should be considered. See below.

Working Around Mold

1.5. If the mold growth was caused by sewage back-up or other contaminated water, potential pathogens may be present, and the work should be further investigated. See Bloodborne Pathogens Program.

1.6. If the mold growth is due to condensation or a small-scale leak and is limited to a small area (less than 10 square feet), we may do the work ourselves, following guidelines such as those that have been prepared by the U.S. Environmental Protection Agency (EPA). Visit www.epa.gov/iaq/molds/index.html.

2. Work Procedures

2.1. We do not anticipate employees routinely being occupationally exposed to these hazards.

2.2. In addition, employees must wear the proper PPE and be enrolled in the Respiratory Protection Program.

2.3. Below are some guidelines for the work activities, procedures, and personal protective equipment we will use when working around mold and fungus.

Surface Area	PPE	Containment
Small (10 sq. ft. or less)	Minimum (N95, gloves, goggles, eye)	None required
Medium (10–100 sq. ft.)	Limited/full (N95 or ½ face with HEPA, disposable coveralls, goggles, eye)	Limited (ceiling to floor covering, block HVAC)
Large (greater than 100 sq. ft.) or significant exposure **Projects of this scale may be subcontracted**	Full (gloves, disposable full body clothing, headgear, foot covering, full face respirator with HEPA)	Full (two layers of poly, HVAC blocked, negative pressure w/HEPA air handler)

2.4. These jobs and tasks will be maintained on file by the safety program administrator.

2.5. On hard surfaces, such as countertops and furniture, use detergent and water to wash mold off and then dry completely. The use of biocides or chemical disinfectants is not recommended, as these may be hazardous to occupants. Moldy porous or absorbent materials, such as ceiling tiles, wallboard, and carpeting, should be removed and replaced. Persons cleaning mold should wear rubber gloves, goggles, and an approved respirator to protect against breathing airborne spores.

2.6. If an exposure to mold or fungus occurs, an exposure report will be performed by the Safety team and be made available to all employees (and OSHA, upon request).

3. Training

3.1. Training will be conducted prior to employees performing these tasks, or before any anticipated exposure to mold or fungus. Training documentation will remain on file with the company.

ON-SITE SAFETY LEARNING

Safety Learning

The company provides and requires ongoing learning via Vivid Learning Systems

1. **Safety Team**
    - 1.1. Sets required topics annually.
    - 1.2. Schedules group classes at all projects over five workers.
    - 1.3. Teaches classes using Vivid.
    - 1.4. Validates learning via printed Vivid tests.
    - 1.5. Administers retraining to employees who don't get a passing score.
    - 1.6. Assigns class credit in Vivid.
    - 1.7. Documents classes credit.
2. **Superintendent**
    - 2.1. Schedules class with Safety Admin at the start of the project.
    - 2.2. Attends class when possible for comradery.
    - 2.3. Takes the monthly class directly from Vivid as necessary.
    - 2.4. Must take and pass all trainings as a condition of work.
3. **Foreman**
    - 3.1. Attends class when possible for comradery.
    - 3.2. Takes the monthly class directly from Vivid as necessary.
    - 3.3. Must take and pass all trainings as a condition of work.
4. **Employees**
    - 4.1. Attend all trainings.
    - 4.2. Pass all classes.
    - 4.3. Take classes in person if no group class is available.

ON-SITE SAFETY MEETINGS

On Site Safety Meetings

Safety Meetings are vital to the success of our onsite safety efforts. We believe all our subcontractors and employees must work together in order to work safely. Onsite safety meetings provide the best opportunity for consistent communication to all parties on site.

We use two (2) different types of safety meetings used in conjunction provide the most benefit to our workers and subcontractors. Both meetings are required on all projects we manage.

1. **Weekly Safety Meetings**
    - 1.1. All Subcontractors are required to attend.
    - 1.2. All employees must attend.
    - 1.3. Must contain the following elements.
    - 1.4. A relevant Toolbox safety training topic.
    - 1.5. Site specific hazards to be aware of.
    - 1.6. A sign in sheet.
    - 1.7. Discussion of subcontractor and GC working areas and scopes.
2. **Daily Rally**
    - 2.1. Subcontractors must attend.
    - 2.2. All employees must attend.
    - 2.3. Must contain the following elements:
        - 2.3.1. GC lead stretch and flex session with superintendent and/or foreman.
        - 2.3.2. Changes to workplace hazards from the day before.
        - 2.3.3. Brief updates from the subs as to where and what they will be working on that day.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal Protective Equipment (PPE)

1. Company Philosophy

The company requires the following PPE to be worn 100% of the time while in the work area. However, PPE is always the last line of defense.

2. Personal Protective Equipment

2.1. Required 100% of the time:

2.1.1. **Hardhats** are required at all times on all jobs. Additionally, hardhats provided to you at orientation are Type II and are required. No personal hardhats are allowed unless they are Type II and approved by the Safety Program Administrator. The chin straps must be worn at all times no more than 1" below the chin. They are required while operating all equipment, including equipment equipped with a roll overprotective structure (ROPS) and/or falling object protective structure (FOPS). Hardhats are not required in office areas, walking to and from vehicles into office areas, in autos and trucks, or construction equipment with fully enclosed cabs. This policy affects all employees, subcontractors, suppliers, and visitors. Modified or defective hardhats and bump caps are not acceptable.

2.1.2. **Sturdy lace up boots** in good repair that cover the ankle are required at all times on all jobs and company property except in office areas. Sturdy work shoes or boots do not include athletic shoes, deck shoes, slippers, or casual footwear.

2.1.3. **Eye protection** is worn when operations present eye or facial injury potential. This would include but is not limited to drilling operations, grinding, welding, cutting, and hammering.

2.1.4. **High-visibility apparel** is required when you are working on foot and exposed to mobile equipment or vehicular traffic, including grade checkers, inspector, spotters, etc.

2.2. Personal Protective Equipment to be worn as needed:

2.2.1. **Hearing protection** such as plugs, or muffs is required when exposed to noise levels exceeding 85 decibels. In general, if shouting is needed to hear a conversation the Action Limit of 85 decibels is being approached or exceeded, and hearing protection should be utilized. Ask your supervisor.

2.2.2. **Respirators and filtering face piece** (dust mask) may be required when there is exposure to harmful dust, fumes, vapors, or gases. Your supervisor will help you select the right respirator to protect you. Respirator use will be allowed only after you have been deemed medically capable to wear a respirator, fit-tested, and trained. Your supervisor must approve voluntary use.

POWDER ACTUATED TOOLS

Powder Actuated Tools

1. **Required Procedures**
   - 1.1. Every employee who will be using a powder actuated tool (PAT) must have received the training below. Check the Field Worker List to see if they have received it. Train those who have not.
   - 1.2. Print "Powder Actuated Tools in Use" signs and post at all entrances to work area where PATs are to be used.
   - 1.3. All people in and around the work area must wear hearing protection.
   - 1.4. Pick up all spent strips.
2. **Training**
   - 2.1. Start a sign in sheet
   - 2.2. Demonstrate loading it
   - 2.3. Go over the rules
     - 2.3.1. Go through the owner's manual (do not skip this step. It is critical in litigation)
     - 2.3.2. Signs
     - 2.3.3. Ear protection
     - 2.3.4. Pick up spent cartridges

For more information, download the OSHA Oregon Fact Sheet on Powder Actuated Fasteners.

RESPIRATORY PROTECTION

Respiratory Protection Program

The safety administrator's duties are to oversee the development of the respiratory program and make sure it is carried out at the workplace. The administrator will also evaluate the program regularly to make sure procedures are followed, respirator use is monitored, and respirators continue to provide adequate protection when job conditions change.

1. Use of Respirators

1.1. Any employee wearing a respirator is included in the company respiratory protection program. There are three reasons to wear a respirator:

1.1.1. Employee is required to wear a respirator.

1.1.2. If an employee asks to wear a respirator with a tight-fitting elastomeric face piece, but it is **not required**. These employees must follow the medical evaluation, cleaning, maintenance, and storage elements of this program.

1.1.3. Any employee who asks to wear a filtering face piece (**dust mask**, N95) will be provided with Appendix D (1910.134) and must follow the respirator cleaning, maintenance, and storage instructions of this program.

1.1.4. Respiratory protection will be provided at no cost to the employee.

2. Selection of Respirators

2.1. Evaluation of chemicals and hazards has been completed, and respirators are required to be used by employees in the following locations or positions or doing the following duties, tasks, or activities:

Employee position or activity	Chemicals or products used	NIOSH approved respirators assigned	When used (routinely, infrequently, or in emergencies)

2.2. The program administrator will select the correct type of respirator and filtering cartridge according to the Oregon OSHA 1910.126 requirements and guidelines.

2.3. Below are the procedures used for selecting the proper respirator:

Note: Program Administrator to add hazard, applicable air monitoring data, and maximum use concentration, and assigned protection factor of respirator and selection basis (1910.134(d)).

3. Training

3.1. Prior to wearing a respirator, and at least annually, employees will be trained in our respiratory protection program. In this training the program administrator will include:

3.1.1. When a respirator is necessary.

3.1.2. What respirator is necessary?

3.1.3. How to properly don, doff, adjust, and wear a respirator.

3.1.4. The limitations of the respirator.

3.1.5. Change out schedule for filters.

The proper care, maintenance, useful life, and disposal of the respirator.

3.2. Employees must demonstrate an understanding of the training and the ability to use the respirator properly before they are allowed to wear the respirator in the required area.

4. Medical Evaluations

4.1. Every employee of this company who wears an elastomeric tight-fitting respirator will be provided with a medical evaluation before they are allowed to use the respirator.

4.2. Employees are required to fill out the questionnaire online in private. Non-readers or non-English-reading employees will be assisted by a company representative. Completed questionnaires are confidential and will be sent directly to medical provider without review by management.

4.3. If the medical questionnaire indicates to our medical provider that a further medical exam is required, the medical exam will be provided at no cost to our employees. This medical provider will provide the company with a recommendation on whether or not the employee is medically able to wear a respirator.

4.4. Additional medical evaluations will be completed in the following situations:

4.4.1. Recommended by medical provider.

4.4.2. Recommended/suggested by respirator program administrator.

4.4.3. An employee shows signs of breathing difficulty.

4.4.4. Changes in work conditions that increase employee physical stress (such as high temperatures or greater physical exertion).

5. Fit Testing

5.1. Employees must be fit tested before they use a respirator for the first time; whenever an employee uses a different model, size, or style of face piece; and after any changes in their physical condition that could affect respirator fit.

5.2. Employees who use respirators with tight-fitting face pieces must first pass a qualitative or quantitative fit test. A qualitative fit test will be used only to fit test negative pressure air-purifying respirators that have a fit factor of 100 or less. A quantitative fit test will be used to test all other tight-fitting face pieces.

5.3. All employees will be fit tested annually.

5.4. Fit tests will be administered from a selection of respirators set up for fit testing purposes (for an initial fit test) or with the employee's assigned respirator (for a subsequent fit test). Each fit test record must identify the following:

5.4.1. Fit test method.

5.4.2. Respirator make, model, and size.

5.4.3. Fit test date.

5.4.4. Fit test results.

5.4.5. Name of the employee tested.

5.5. Employees who wear a respirator are not allowed to wear beards or other conditions that interfere with the face-to-face piece seal or valve function of tight-fitting respirator face pieces. Clean-shaven skin must contact all respirator-sealing surfaces.

5.6. Personal protective equipment or clothing that interferes with the face-to-face piece seal or valve function is not permitted.

5.7. Corrective lenses with temple bars or straps that interfere with the face-to-face piece sealing area cannot be used.

5.8. Employees must perform seal checks before using tight-fitting respirators (also called a fit check).

6. Program Evaluation

6.1. The program administrator will update the written program when any change in the workplace affects employees' use of respirators or review at least annually.

6.2. **Program Administrator's Responsibilities:**

6.2.1. Establishing procedures for selecting respirators.

6.2.2. Arranging employees' medical evaluations and maintaining file for medical determination and fit test records.

6.2.3. Developing fit testing procedures for tight-fitting respirators.

6.2.4. Developing procedures for using respirators during regular work and during emergencies.

6.2.5. Developing procedures and schedules for inspecting, cleaning, maintaining, and storing respirators.

6.2.6. Developing procedures to ensure high quality breathing air in atmosphere-supplying respirators.

6.2.7. Conducting employee training covering workplace respiratory hazards and how to use and maintain respirators.

6.2.8. Regularly evaluating the written program to identify and correct problems.

6.3. **Employer Responsibilities:**

6.3.1. The company will comply with the requirements of 1910.134 and all other applicable OR-OSHA requirements to protect the safety and health of its employees.

6.3.2. Record retention:

6.3.2.1. Medical evaluation records will be retained for 30 years after the employees' termination date.

6.3.2.2. Fit test records will be held until the next fit test.

6.3.2.3. Training records will be held until the employees' termination date.

6.4. **Employee Responsibilities:**

6.4.1. Employees will use respirators in accordance with the training provided by this company and the requirements of 1910.134.

6.4.2. Employees will maintain their respirators and not alter them in any way.

6.4.3. Any employee using a respirator in a hazardous environment must take reasonable periodic breaks in a safe area to rest and to wash the face piece if it needs cleaning. If the respirator does not work properly, the employee must go immediately to a safe area and report the problem to a supervisor or the program administrator.

SCAFFOLDING

Scaffolding

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Develops specific policies and procedures pertaining to scaffolding.

1.1.2. Implements a training program.

1.1.3. Coordinates the training.

1.1.4. Maintains the training certification records of employees training sessions.

1.1.5. Reviews the effectiveness of the program.

1.1.6. Provides technical support to supervisors and employees.

1.6. Superintendent

1.6.1. Hires vendor qualified to sell, inspect and erect scaffolding.

1.6.2. Provides observations and feedback to employees to ensure jobsite safety.

1.6.3. Ensures the scaffolding under their responsibility is properly inspected and maintained in a safe operating condition by a competent person.

1.6.4. Provides program feedback to the safety director.

1.7. Foreman

1.7.1. Ensures that employees at their jobsites have received appropriate training.

1.7.2. Provides observations and feedback to employees to ensure jobsite safety.

1.7.3. Inspects the scaffolding under their responsibility daily.

1.7.4. Provides program feedback to the safety director.

1.8. Employees

1.8.1. Work on scaffolding for which they have been specifically trained and authorized.

1.8.2. Work in a safe manner and utilize safe work practices.

1.8.3. Work on scaffolding that has been inspected at the beginning of the day or prior to each work shift.

1.8.4. Report all equipment defects to their supervisors immediately.

1.8.5. Wear appropriate personal protective equipment.

1.8.6. Notify their supervisor of jobsite conditions where safety hazards exist.

2. Definitions

2.1. **Brace:** a tie that holds one scaffold member in a fixed position with respect to another member. Brace is also a rigid type of connection holding a scaffold to a building or structure.

2.2. **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.

2.3. **Coupler:** a device for locking together the component tubes of a tube and coupler scaffold.

2.4. **Fixed ladder:** a ladder, including an individual rung ladder that is permanently attached to a structure, building, or equipment.

2.5. **Guardrail:** a barrier with a top rail 38–45 inches above the platform surface and a mid-rail erected to prevent personnel from falling from the scaffolding platform or walkway to a lower level.

2.6. **Harness:** a design of straps that is secured about the employee in a manner to distribute the arresting forces over at least the thighs, shoulders, and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration device.

2.7. **Hoist:** a mechanical device to raise or lower a suspended scaffold. It can be mechanically powered or manually operated.

2.8. **Maximum intended load:** the total load of all employee, equipment, tool, materials, transmitted, wind, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

2.9. **Outriggers:** the structural member of a supported scaffold used to increase the base width of a scaffold in order to provide greater stability for the scaffold.

2.10. **Platform:** the horizontal working surface of a scaffold.

2.12. **Qualified person:** one who, by possession of a recognized degree, certificate, professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

2.13. **Scaffold:** any temporary elevated or suspended platform and its supporting structure used for supporting employees, materials, or both; this term does not include crane- or derrick-suspended personnel platforms.

2.14. **Toe board:** a low protective barrier that prevents material, equipment, and personnel from falling to lower levels.

2.15. **Tie-off:** a procedure of connecting directly or indirectly to an anchorage.

2.16. **Unprotected sides and edges:** any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail.

3. Requirements for Scaffolding

3.1. Capacity

3.1.1. Each scaffold and scaffold component used will support, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.

3.1.2. When using non-adjustable suspension scaffolds, each suspension rope, including connecting hardware, will support, without failure, at least six times the maximum intended load applied or transmitted to that rope.

3.2. Platform Construction

3.2.1. Each scaffold plank will be installed so that the space between adjacent planks and the space between the platform and uprights is no more than one inch wide.

3.2.2. With the exception of plastering and lathing operations (18 inches), the front edge of all platforms will not be more than 14 inches from the face of the work, unless there is a guardrail or personal fall arrest system in place that meet fall protection requirements.

Scaffolding

3.3. **Supported Scaffolds**

3.3.1. Supported scaffolds with a height-to-base width ratio of more than four-to-one (4:1) will be restrained from tipping by guying, tying, bracing, or equivalent means.

3.3.2. Supported scaffold poles, legs, posts, frames, and uprights will always bear on base plates and mud sills or other adequate firm foundations.

3.3.3. Supported scaffold poles, legs, posts, frames, and uprights will be plumb and braced to prevent swaying and displacement.

3.4. **Suspension Scaffolds**

3.4.1. Walkways will be at least 18 inches wide.

3.4.2. On scaffolds where platforms are overlapped to create a long platform, the overlap will occur only over supports, and will not be less than 12 inches unless the platforms are nailed together or secured to prevent movement.

3.4.3. Wood platforms will not be covered with opaque finishes.

3.4.4. Platforms will not deflect more than 1/60 of the span or two inches for a 10-foot plank when loaded.

3.4.5. The following additional construction and safety information will be included, depending on the type of scaffold being erected.

3.4.6. Supported scaffolds with a height-to-base width ratio of more than four-to-one (4:1) will be restrained from tipping by guying, tying, bracing, or equivalent means.

3.4.7. Supported scaffold poles, legs, posts, frames, and uprights will always bear on base plates and mud sills or other adequate firm foundations.

3.4.8. Supported scaffold poles, legs, posts, frames, and uprights will be plumb and braced to prevent swaying and displacement.

3.4.9. All suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps, and similar devices, will rest on surfaces capable of supporting at least four times the load imposed on them by the scaffold operating at the rated load of the hoist.

3.4.10. The inboard ends of suspension scaffold outrigger beams will be stabilized by bolts or other direct connections to the floor or roof deck, or they will have their inboard ends stabilized by counterweights. Review manufacturer's instructions.

3.4.11. When winding drum hoists are used on a suspension scaffold, they will never contain less than four wraps of the suspension rope at the lowest point of scaffold travel.

3.4.12. Ropes will be inspected for defects by a competent person prior to each work shift and after every occurrence that could affect a rope's integrity.

3.4.13. Swaged attachments or spliced eyes on wire suspension ropes will not be used unless they are made by the wire rope manufacturer or a qualified person.

3.4.14. When scaffold platforms are more than two feet above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface will be utilized.

3.4.15. Cross-braces will not be used as a means of access.

3.5. **Access**

3.5.1. Portable, hook-on, and attachable ladders will be positioned and secured as not to tip the scaffold.

3.5.2. Steps and rungs of ladder- and stairway-type access will line up vertically with each other between rest platforms.

3.5.3. Stairway-type ladders will have the bottom step not more than 24 inches above the scaffold supporting level, provide rest platforms at a minimum of 12-foot vertical intervals, have a minimum step width of 16 inches, and have slip-resistant treads on all steps and landings.

3.5.4. Stair towers (scaffold stairway/towers) will have the bottom step not more than 24 inches above the scaffold supporting level. A stair rail consisting of a top rail and a mid-rail will be provided on each side of each scaffold stairway. The handrails will be surfaced to prevent injury to employees. A landing platform at least 18 inches wide by at least 18 inches long will be provided at each level.

3.5.5. Ramps and walkways six feet or more above lower levels will have guardrail systems.

3.6. **Use**

3.6.1. Scaffolds and scaffold components will never be loaded in excess of their maximum intended loads or rated capacities.

3.6.3. Scaffolds and scaffold components will be inspected for visible defects by a competent person before each work shift and after any occurrence that could affect a scaffold's structural integrity.

3.6.4. Damaged or weakened scaffolds will be immediately repaired or replaced. Damaged components will be removed from service until repaired.

3.6.5. Scaffolds will not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement.

3.6.6. The clearance between scaffolds and power lines will be as follows: scaffolds will 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		
Voltage	**Minimum Distance**	**Alternatives**
Less than 300 volts 300 volts to 50 kv More than 50 kv	3 feet (0.9m) 10 feet (3.1m) 10 feet (3.1m) plus 0.4 inches (1.0 cm) for each 1 kv over 50 kv	Two times the length of the line insulator, but never less than 10 feet (3.1m).
UNINSULATED LINES		
Voltage	**Minimum Distance**	**Alternatives**
Less than 50 kv More than 50 kv	10 feet (3.1m) 10 feet (3.1m) plus 0.4 inches (1.0 cm) for each kv over 50 kv	Two times the length of the line insulator, but never less than 10 feet (3.1m)

3.6.7. Debris will not be allowed to accumulate on platforms.

3.6.8. Employees will not work on scaffolds covered with snow, ice, or other slippery material except when necessary to remove such materials.

3.6.9. Ladders or other makeshift devices, such as boxes, barrels, etc., will not be used on top of scaffold platforms to increase the working level height of employees.

3.6.10. Scaffold components manufactured by different manufacturers will never be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained.

3.6.11. Unstable objects will never be used to support scaffolds or platform units. Footings will be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.

3.6.12. Cross braces will never be used as a means of access.

3.6.13. The use of shore or lean-to scaffolds is prohibited.

3.8. **Fall Protection**

3.8.1. Fall protection planning is critical to the safety and well-being of our employees. Fall protection will be provided for any employee on scaffold more than 10 feet above a lower level.

3.8.2. Guardrail systems will be installed along all open sides and ends of platforms. Guardrail systems will be installed before the scaffold is released for use by employees other than erection/dismantling crews.

3.8.3. The top rail will have a minimum 200-pound capacity. The top edge height of top rails or equivalent member on supported scaffolds will be installed between 38 inches and 45 inches above the platform surface.

3.8.4. Mid rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system will be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the mid rail or other member of at least 150 pounds. They will be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.

3.8.5. Cross bracing is acceptable in place of a mid-rail when the crossing point of two braces is between 20 inches and 30 inches above the work platform, or as a top rail when the crossing point of two braces is between 38 inches and 48 inches above the work platform. The end points at each upright will be no more than 48 inches apart.

3.8.6. Guardrails will be installed before being released for use by employees.

3.9. **Falling Object Protection**

Employees will wear hardhats while working on scaffolds and will be provided with additional protection from falling hand tools, debris, and other small objects with the installation of toe boards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. When the falling objects are too large, heavy, or massive to be contained or deflected by any of the above-listed measures, those potential falling objects will be placed away from the edge of the surface and secured.

Scaffolding

4. Training

4.1. Employees who perform work on scaffolds will be trained by a qualified person to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training will include the following, as applicable:

4.1.1. The nature of and the correct procedures for working around electrical hazards.

4.1.2. Fall protection and falling object protection systems and the correct procedures for using, erecting, maintaining, and disassembling them properly.

4.1.3. The proper use of the scaffold, and the proper handling of materials on the scaffold.

4.1.4. The maximum intended load and the load-carrying capacities of the scaffolds used.

4.1.5. The OR-OSHA standards regarding scaffolding.

4.2. Employees who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds will be trained by our competent person to recognize the hazards associated with the work being done. The training will include the following, as applicable:

4.2.1. The nature of scaffold hazards.

4.2.2. The correct procedures for erection, disassembly, relocation, operation, repair, inspection, and maintenance.

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

4.2.4. Any other pertinent requirements of this subpart.

4.3. The Company will provide retraining to employees for the following situations:

4.3.1. When changes in the worksite present a hazard and the employee has not been previously trained.

4.3.2. When changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard and the employee has not been previously trained.

4.3.3. When there are inadequacies in an affected employee's work involving scaffolds that indicate that the employee has not retained proficiency.

SILICA CONTROL PROGRAM

Silica Control Program

All work that creates silica dust must follow OSHA Table 1 exactly or have test results from an accredited Industrial Hygiene provider stating the exposure levels are safe and that the conditions are exactly the same (Outdoor, no rain, 60 degrees, 5 mph winds etc.) as the test documents.

1. Responsibilities

1.1. Safety Program Administrator

1.1.1. Develops policies and procedures pertaining to safe work practices with RCS.

1.1.2. Helps identifies and evaluate silica hazards in the workplace.

1.1.3. Provides employees with respiratory protection training if respirators are to be used.

1.1.4. Schedules silica baseline medical evaluations, respirator medical evaluations, and fit tests for employees.

1.1.5. Ensures that the physician or other licensed health care professional (PLHCP) has a copy of the OR-OSHA/OSHA standard, and the information that the standard requires the company to provide to the PLHCP.

1.1.6. Performs employee notification of exposure assessment results.

1.1.7. Maintains medical and training records required by the standard.

1.1.8. Ensures superintendents, foremen, and employees are educated in the hazards of silica exposure and trained to work safely with silica in accordance with OR-OSHA/OSHA's Standard and OR-OSHA/OSHA's Hazard Communication Standard.

1.1.9. Prepares or assists jobsite staff in preparing a **job-specific respirable silica control plan.**

1.1.10. Designates a competent person to make frequent and regular inspections of job sites, materials, and equipment to verify implementation of the written exposure control plan.

1.1.11. Reviews this policy at least annually and makes required updates.

1.2. Supervisors – Competent Person

1.2.1. Shall be responsible for managing this procedure.

1.2.2. Ensures a job-specific respirable silica control plan is prepared, reviewed, and signed by employees for each activity where employees are exposed to respirable silica as required by the competent person.

1.2.3. Assists the safety department in identifying and evaluating silica hazards in the workplace.

1.2.4. Ensures employees who are authorized to work on operations where exposure to respirable silica exists or is created have been properly trained in this procedure.

1.2.5. Ensures employees have been qualified and trained to wear respirators, if applicable and receive periodic medical examinations when exposure to respirable silica is ongoing.

1.2.6. Ensures tools, material, equipment, and PPE identified in this procedure are in place, readily available, and training provided if need.

1.2.7. Ensures employees are following training work activities where they are exposed to respirable silica over 50 ppm. Reports the type of work activities so recordkeeping can be properly tracked.

1.2.8. Ensure work is conducted to control the exposure to workers and others. This is achieved by engineering controls, work practices, and use of appropriate PPE.

1.2.9. Coordinate with other employers and contractors to ensure a safe work environment to control RCS exposure.

1.2.10. Provide program feedback to the safety department.

1.3. **Employees**

1.3.1. Never work without a silica control plan that references the Table 1 section of the work to be completed

1.3.2. Follow recognized work procedures (tasks in OR-OSHA/OSHA's Construction Standard Table 1, see Appendix A – Table 1) as established in the project's ECP and this program.

1.3.3. Use the assigned PPE for the task in an effective and safe manner.

1.3.4. Participate in RCS exposure monitoring and the medical surveillance program if requested.

1.3.5. Report unsafe conditions or acts to the foreman and/or project manager

1.3.6. Report exposure incidents or any signs or symptoms of silica illness.

2. Definitions

2.1. **Action level** – a concentration of airborne RCS of 25 µg/m3, calculated as an eight-hour time weighted average (TWA).

2.2. **Air monitoring data** is obtained when a trained specialist, such as an industrial hygienist, uses a sampling device to trap respirable silica particles from the air in the work environment. Samples are sent to an accredited laboratory for analysis. The trained specialist performs evaluation of the lab results and prepares recommendations for controlling respirable silica hazards.

2.3. **Competent person** – an individual capable of identifying existing and foreseeable RCS hazards in the workplace who has authority to take prompt corrective measures to eliminate or minimize them.

2.4. **Employee exposure** – the exposure to airborne RCS that would occur if the employee were not using a respirator.

2.5. **Feasible engineering control** – a manufacturer-supplied tool or attachment that removes respirable silica through wet methods (a stream of water designed to control silica dust created by the cutting action based on the size and speed of the tool) or local exhaust ventilation that removes respirable silica at the point where it is being generated and traps it in a HEPA filter.

2.6. **High-efficiency particulate air (HEPA) filter** – a filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.

2.7. **Objective data** – information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to RCS associated with a product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the company's current operations.

2.8. **Permissible exposure limit (PEL)** The eight-hour TWA PEL is the highest level of exposure an employee may be exposed to without incurring the risk of adverse health effects. TWA (time weighted average) is the employee's average airborne exposure in any eight-hour work shift of a 40-hour work week which shall not be exceeded. The company shall ensure that no employee is exposed to an airborne concentration of RCS exceeding 50 µg/m3, calculated as an eight-hour TWA.

2.9. **Physician or other licensed health care professional (PLHCP)** – an individual whose legally-permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by the Medical Surveillance Section of the OR-OSHA/OSHA RCS standard.

2.10. **Respirable crystalline silica (RCS)** means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle size- selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality-Particle Size Fraction Definitions for Health-Related Sampling.

2.11. **Specialist** means an American Board-Certified Specialist in Pulmonary Disease or an American Board-Certified Specialist in Occupational Medicine.

2.12. **Standard** means OR-OSHA 437-002-1053-1065 for OSHA 29 CFR 1926.1153 RCS, including appendices for both.

3. Respirable Silica Program Requirements

3.1. Specific Exposure Control Methods

3.1.1. The company will conduct activities with potential RCS exposure to be utilize OR-OSHA/OSHA's Construction Standard Table 1, referred to as Table 1 hereafter (see Appendix A – Table 1). Supervisors will ensure all employees under their supervision and engaged tasks identified on Table 1 have fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the tasks on Table 1; this includes knowledge of equipment manufactures' proper operating instructions. Tasks not identified in Table 1 will be addressed in the Alternative Exposure Control Methods section of this program.

3.1.1.1. Implementing Controls in Table 1, see Appendix A – Table 1

3.1.1.1.1. When performing tasks indoors or in enclosed areas, provide a means of exhaust to minimize the accumulation of visible airborne dust.

3.1.1.1.2. When performing tasks using wet methods, apply water at flow rates sufficient to minimize release of visible dust.

3.1.1.1.3. Where an employee performs more than one task in Table 1, (see Appendix A – Table 1) during a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks in Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

3.2. **Alternative Exposure Control Methods**

Tasks not listed in Table 1, (see Appendix A – Table 1) or where the company cannot fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1, alternative exposure control methods will be implemented.

The company will assess the exposure of each employee who is or may reasonably be expected to be exposed to RCS at or above the action level in accordance with either the performance option or the scheduled monitoring option.

3.2.1. Performance option shall assess the eight-hour TWA exposure for each employee based on any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to RCS.

3.2.2. Scheduled monitoring option is initial monitoring to assess the eight-hour TWA exposure for each employee based on one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area that the company shall perform. Where several employees perform the same tasks on the same shift and in the same work area, the company may sample a representative fraction of these employees to meet this requirement. In representative sampling, the company shall sample the employee(s) who are expected to have the highest exposure to RCS.

3.2.3. If initial monitoring indicates that employee exposures are below the action level, the company may discontinue monitoring for those employees whose exposures are represented by such monitoring.

3.2.4. Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, **The company shall repeat such monitoring within six months of the most recent monitoring.**

3.2.5. Where the most recent exposure monitoring indicates that employee exposures are **above the PEL, the company shall repeat such monitoring within three months of the most recent monitoring.**

3.2.6. Where the most recent (non-initial) exposure monitoring indicates that employee exposures are **below** the action level, the company shall repeat such monitoring within **six months** of the most recent monitoring **until** two consecutive measurements, taken **seven or more days apart**, are below the action level, at which time our company may discontinue monitoring for those employees whose exposures are represented by such monitoring.

3.2.7. Reassessment of exposures shall be completed whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when company has any reason to believe that new or additional exposures at or above the action level have occurred.

3.3. **Monitoring**

3.3.1. The company will ensure that RSC samples taken to satisfy the monitoring requirements of this program and OR-OSHA/OSHA are collected by a qualified individual and the samples are evaluated by a qualified laboratory.

3.3.2. The company will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees within five working days after completing an exposure assessment.

3.3.3. Whenever an exposure assessment indicates that employee exposure is above the PEL, the company will describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

3.3.4. The company will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to RCS. Observers for monitoring in an area where the use of protective clothing or equipment is required for any workplace hazard with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

3.3.5. Once air monitoring has been performed, the company will determine its method of compliance based on the monitoring data and the hierarchy of controls. MHA Resource Company will use engineering and work practice controls to reduce and maintain employee exposure to RCS to or below the PEL, unless the company can demonstrate that such controls are not feasible. Wherever feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, the company will use them regardless to reduce employee exposure to the lowest feasible level and shall supplement the engineering and work practice controls with the use of respiratory protection.

3.3.6. The company will comply with other programs and OR-OSHA/OSHA standards (such as 29 CFR 1926.57 [Ventilation]), when applicable, where abrasive blasting is conducted using crystalline silica-containing blasting agents, or where abrasive blasting is conducted on substrates that contain crystalline silica.

3.4. Control Methods

3.4.1. The company will provide control methods that are either consistent with Table 1 (see Appendix A – Table 1) or otherwise minimize worker exposures to RCS. These exposure control methods can include engineering controls, work practices, and respiratory protection. When Table 1 is not followed, see Appendix B – Silica Controls Equipment or PPE for Specific Tasks for control methods.

4. Respiratory Protection, Medical Surveillance, and Recordkeeping

4.1. Respiratory Protection

4.1.1. Employees will be provided with an appropriate respirator that complies with the requirements of the company's respiratory protection program and the OR-OSHA/OSHA respiratory protection standard where respiratory is required.

4.1.2. Respiratory protection is required where specified by Table 1 (see Appendix A – Table 1); for tasks not listed in Table 1, or where the company has not fully and properly implemented the engineering controls, work practices, and respiratory protection described in Table 1. Situations requiring respiratory protection include:

4.1.2.1. Exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;

4.1.2.2. Exposures exceed the PEL during tasks, certain maintenance, and/or repair tasks, when engineering and work practice controls are not feasible; and

4.1.2.3. During tasks when all feasible engineering and work practice controls and such controls are implemented yet not sufficient to reduce exposures to or below the PEL.

4.2. Medical Surveillance

4.2.1. Medical surveillance will be made available for each employee who will be required to use a respirator for 30 or more days per year due to their RCS exposure. Medical surveillance (i.e. medical examinations and procedures) will be performed by a PLHCP and provided at no cost to the employee at a reasonable time and place.

4.2.1.1. May use hardhat stickers such as the example below. The exposed employee would cross off each day a respirator is worn for RCS.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
Call to schedule medical evaluation				

4.2.1.2. Timecards may be used for tracking respirator use for RCS.

4.2.1.3. Other means of tracking respirator use may be employed.

4.2.2. The company will make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of the OR-OSHA/OSHA RCS construction standard **within the last three years.** The examination shall consist of the requirements set forth by OR-OSHA/OSHA under the medical surveillance portion of the RCS standard.

4.2.3. The company will make available medical examinations that consist of the requirements set forth by OR-OSHA/OSHA under the medical surveillance portion of the RCS standard (except testing for latent tuberculosis infection) at least every three years. If recommended by the PLHCP, periodic examinations can be more frequently than every three years.

4.2.4. If an employee declines the medical evaluation, a declination form that must be completed

4.2.5. The company will ensure that the examining PLHCP has a copy of the OR-OSHA/OSHA RCS construction standard, this program, and the following information:

4.2.5.1. A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to RCS.

4.2.5.2. The employee's former, current, and anticipated levels of occupational exposure to RCS.

4.2.5.3. A description of any personal protective equipment (PPE) used or to be used by the employee, including when and for how long the employee has used or will use that equipment.

4.2.5.4. Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the company. A Respirator Medical Evaluation Information to PLHCP Form must be completed.

4.2.6. The PLHCP will explain to the employee the results of the medical examination and provide each employee with a written medical report of the examination performed. The written report shall contain:

4.2.6.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to RCS and any medical conditions that require further evaluation or treatment;

4.2.6.2. Any recommended limitations on the employee's use of respirators;

4.2.6.3. Any recommended limitations on the employee's exposure to RCS; and

4.2.6.4. A statement that the employee should be examined by a specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

4.2.7. The company will receive a written medical opinion from the PLHCP. The written opinion shall contain only the following to protect the employee's privacy:

4.2.7.1. The date of the examination;

4.2.7.2. A statement that the examination has met the requirements of the OR-OSHA/OSHA RCS Construction Standard; and

4.2.7.3. Any recommended limitations on the employee's use of respirators.

4.2.8. If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the company will make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion. The company will ensure that the examining specialist is provided with all the information that the company is obligated to provide to the PLHCP.

4.2.9. The specialist provided will explain to the employee the results of the medical examination. The written report will contain:

4.2.9.1. A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to RCS and any medical conditions that require further evaluation or treatment;

4.2.9.2. Any recommended limitations on the employee's use of respirators; and

4.2.9.3. Any recommended limitations on the employee's exposure to RCS.

4.2.10. The company will obtain a written opinion from the specialist. The written opinion shall contain the following:

4.2.10.1. The date of the examination;

4.2.10.2. Any recommended limitations on the employee's use of respirators; and

4.2.10.3. If the employee provides written authorization, the written opinion shall also contain any recommended limitations on the employee's exposure to RCS.

4.3. **Recordkeeping**

4.3.1. The company will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to RCS. This record will include at least the following information:

4.3.1.1. The date of each sample taken

4.3.1.2. The task monitored

4.3.1.3. Sampling and analytical methods used

4.3.1.4. Number, duration, and results of samples taken

4.3.1.5. Identity of the laboratory that performed the analysis

4.3.1.6. Type of PPE, such as respirators, worn by the employees monitored

4.3.1.7. Name and job classification of the employees being monitored

4.3.1.7.1. The company will ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020. Exposure records will be kept for at least 30 years.

4.3.2. The company shall make and maintain a record of all objective data relied upon to comply with the requirements of the OR-OSHA/OSHA RSC standard. This record shall include at least the following information:

4.3.2.1. The crystalline silica-containing material in question

4.3.2.2. The source of the objective data

4.3.2.3. The testing protocol and results of testing

4.3.2.4. A description of the process, task, or activity on which the objective data were based

4.3.2.5. Other data relevant to the process, task, activity, material, or exposures on which the objective data were based

4.3.2.5.1. The company will ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020. Objective data records will be kept for at least 30 years.

4.3.3. The company will make and maintain a record for each employee in the medical surveillance portion of this program. The record shall include the following information about the employee:

4.3.3.1. Name and/or employee number

4.3.3.2. A copy of the PLHCPs' and/or specialists' written medical opinions

4.3.3.3. A copy of the information provided to the PLHCPs and specialists

4.3.3.3.1. The company will ensure that medical records are maintained and made available in accordance with 29 CFR 1910.1020. Medical records will be kept under lock and key for at least the duration of employment plus 30 years.

4.3.3.3.2. If an employee works for an employer for less than one year, the company does not have to keep the medical records after employment ends. The company may give those records to the employee.

5. Hazard Communication

5.1. The company will include RCS in the company's Hazard Communication Program.

5.2. The company will provide each employee has access to labels on containers of crystalline silica and those containers' Safety Data Sheets (SDS).

5.3. All employees will be trained the requirements of the OR-OSHA/OSHA Hazard Communication Standard and the training section of this program. This training will cover concerns relating to health hazards such as: cancer, lung effects, immune system effects, and kidney effects.

5.4. The company will ensure that each employee with the potential to be exposed at or above the action level for RCS can demonstrate knowledge and understanding of at least the following:

5.4.1. The health hazards associated with exposure to RCS

5.4.2. Specific tasks in the workplace that could result in exposure to RCS

5.4.3. Specific controls the company has taken to protect employees from exposure to RCS, including engineering controls, work practices, and respirators to be used

5.4.4. The contents of the OR-OSHA/OSHA RCS Standard

5.4.5. The identity of the competent person designated by MHA Resource Company

5.4.6. The purpose and a description of the company's Medical Surveillance Program.

5.5. **The company will make a copy of the OR-OSHA/OSHA RCS standard readily available any employee upon request.**

6. Housekeeping

6.1. The company does not allow dry sweeping or brushing where such activity could contribute to employee exposure to RCS, unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible.

6.1.1. Sweeping compound may be used with monitoring or objective data to support the use of the sweeping compound (see Appendix C – OR-OSHA Technical Guidance – Sweeping Compound).

6.2. The company does not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to RCS unless:

6.2.1. The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air, or

6.2.2. No alternative method is feasible.

7. Written Exposure Control Plan

7.1. For employees exposed on a construction project that is expected to be at or above the action level, a written exposure control plan (ECP) will be established and implemented. This ECP will contain at least the following elements:

7.1.1. A description of the tasks in the workplace that involve exposure to RCS;

7.1.2. A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to RCS for each task;

7.1.3. A description of the housekeeping measures used to limit employee exposure to RCS; and

7.1.4. A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to RCS and their level of exposure, including exposures generated by other employers or sole proprietors.

7.2. The ECP will name a competent person to make frequent and regular inspections of job sites, materials, and equipment to ensure the ECP is implemented.

7.3. The ECP will be reviewed at least annually to ensure effectiveness and updated as necessary. The ECP will be available for examination and copying, upon request, to employees covered by this program and/or ECP, their designated representatives, and OR-OSHA/OSHA.

7.3.1. Written ECPs for various tasks are available. Use the Silica Controls Equipment or PPE for Specific Tasks and Written Exposure Control Plan Forms.

8. Training Wrap-Up

8.1. Hazard Communication

8.1.1. Employees working on projects where they could be exposed to RCS will be provided training in silica hazards in accordance the company program established to comply with the hazard communication standard.

8.1.2. Each employee will have access to labels on containers of crystalline silica and SDSs.

8.1.3. Training will provide information on the health hazards of silica, including cancer, lung effects, immune system effects, and kidney effects.

8.2. The company employees will be provided training and information regarding specific activities identified in this program that could result in RCS exposure, and specific engineering controls, work practices, and respiratory protection requirements to mitigate the potential RCS exposures.

8.3. Training will provide a discussion of silica hazards, initial exposure determination either by complying with Table 1 (see Appendix A – Table 1) requirements or air monitoring, specific engineering and work practice control measures, PPE, and medical surveillance requirements.

8.4. Training will identify the company competent person for silica exposure identification and determination of control requirements.

9. Program Evaluation

This program will be reviewed and evaluated on an annual basis by the safety department/safety committee unless changes to operations, the OR-OSHAOSHA RCS standard, or another applicable OSHA standard requires changes sooner.

Silica Control Program

Appendix A – Table 1

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
1	Stationary masonry saws	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
2a	Handheld power saws (any blade diameter) when used outdoors	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	N95 (or greater efficiency) filtering facepiece or half mask
2b	Handheld power saws (any blade diameter) when used indoors or in an enclosed area	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	N95 (or greater efficiency) filtering facepiece or half mask	N95 (or greater efficiency) filtering facepiece or half mask
3	Handheld power saws for cutting fiber-cement board (with blade diameter of eight inches or less) for tasks performed outdoors only	• Use saw equipped with commercially available dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.	None	None
4a	Walk-behind saws when used outdoors	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None

Silica Control Program

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
4b	Walk-behind saws when used indoors or in an enclosed area	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	N95 (or greater efficiency) filtering facepiece or half mask	N95 (or greater efficiency) filtering facepiece or half mask
5	Drivable saws for tasks performed outdoors only	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
6	Rig-mounted core saws or drills	• Use tool equipped with integrated water delivery system that supplies water to cutting surface. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
7	Handheld and stand-mounted drills (including impact and rotary hammer drills)	• Use drill equipped with commercially available shroud or cowling with dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. • Use a HEPA-filtered vacuum when cleaning holes.	None	None
8	Dowel drilling rigs for concrete for tasks performed outdoors only	• Use shroud around drill bit with a dust collection system. • Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism. • Use a HEPA-filtered vacuum when cleaning holes.	N95 (or greater efficiency) filtering facepiece or half mask	N95 (or greater efficiency) filtering facepiece or half mask

Silica Control Program

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
9a	Vehicle-mounted drilling rigs for rock and concrete	• Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector.	None	None
9b	Vehicle-mounted drilling rigs for rock and concrete	• Operate from within an enclosed cab and use water for dust suppression on drill bit.	None	None
10a	Jackhammers and handheld powered chipping tools when used outdoors	• Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.	None	N95 (or greater efficiency) filtering facepiece or half mask
10b	Jackhammers and handheld powered chipping tools when used indoors or in an enclosed area	• Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.	N95 (or greater efficiency) filtering facepiece or half mask	N95 (or greater efficiency) filtering facepiece or half mask
10c	Jackhammers and handheld powered chipping tools when used outdoors	• Use tool equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.	None	N95 (or greater efficiency) filtering facepiece or half mask
10d	Jackhammers and handheld powered chipping tools when used indoors or in an enclosed area	• Use tool equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.	N95 (or greater efficiency) filtering facepiece or half mask	N95 (or greater efficiency) filtering facepiece or half mask

Silica Control Program

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
11	Handheld grinders for mortar removal (i.e., tuckpointing)	• Use grinder equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	N95 (or greater efficiency) filtering facepiece or half mask	Powered air-purifying respirator (PAPR) with P100 filters
12a	Handheld grinders for uses other than mortar removal for tasks performed outdoors only	• Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
12b	Handheld grinders for uses other than mortar removal when used outdoors	• Use grinder equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	None	None

Silica Control Program

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
12c	Handheld grinders for uses other than mortar removal when used indoors or in an enclosed area	• Use grinder equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	None	N95 (or greater efficiency) filtering facepiece or half mask
13a	Walk-behind milling machines and floor grinders	• Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
13b	Walk-behind milling machines and floor grinders	• Use machine equipped with dust collection system recommended by the manufacturer. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. • When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None	None
14	Small drivable milling machines (less than half-lane)	• Use a machine equipped with supplemental water sprays designed to suppress dust. • Water must be combined with a surfactant. • Operate and maintain machine to minimize dust emissions.	None	None

Silica Control Program

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
15a	Large drivable milling machines (half-lane and larger) for cuts of any depth on asphalt only	• Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. • Operate and maintain machine to minimize dust emissions.	None	None
15b	Large drivable milling machines (half-lane and larger) for cuts of four inches in depth or less on any substrate	• Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. • Operate and maintain machine to minimize dust emissions.	None	None
15c	Large drivable milling machines (half-lane and larger) for cuts of four inches in depth or less on any substrate	• Use a machine equipped with supplemental water spray designed to suppress dust. • Water must be combined with a surfactant. • Operate and maintain machine to minimize dust emissions.	None	None
16	Crushing machines	• Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). • Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. • Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote-control station.	None	None
17a	Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	• Operate equipment from within an enclosed cab.	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	> 4 hours/shift
17b	Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	• When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None
18a	Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials	• Apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None
18b	Crushing machines	• Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). • Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. • Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote-control station.	None	None

Silica Control Program

Appendix B – Silica Controls Equipment or PPE for Specific Tasks

PPE ACTIVITY	Basic 5: Hard hat, safety glasses, gloves, Type II traffic vest, boots	Face Shield	Hearing Protection	Long Shirt Sleeves	Rubber Boots	Steel toes or guards	Tool	Dust control	Respirator	Notes
Bushing	X	X	X	X			Electric bushing hammer	Attached shroud and HEPA dust collection system	1,3	OSHA Table I, (x)
Bushing	X	X	X	X	X		Pneumatic bushing hammer	Continuous water stream at bit point	1,3	OSHA Table I, (x)
Chipping	X	X	X	X			Electric chipping hammer	Attached shroud and HEPA dust collection system	1,3	OSHA Table I, (x)
Chipping	X	X	X	X	X		Pneumatic chipping hammer	Continuous water stream at bit point	1,3	OSHA Table I, (x)
Core drilling	X	X	X		X		Electric core drill	Integrated, continuous feed water delivery system	None	OSHA Table I, (vi)
Cured slab sawing	X		X		X		Fuel powered walk behind saw	Integrated, continuous feed water delivery system	1	OSHA Table I, (iv)
Cutting cement board	X	X	X				Hand held saw with blade diameter 8” or less	Attached shroud and HEPA dust collection system. This work must not be done indoors.	None	OSHA Table I, (iii)
Dowel or bolt drilling	X	X	X				Electric	Attached shroud and HEPA dust collection system	None	OSHA Table I, (vii)
Driveable Saw Outdoors	X	X	X		X		Driveable saw	Integrated, continuous feed water delivery system	None	OSHA Table I, (xi)
Driveable Saw Indoors	X	X	X	X	X		Driveable saw	Integrated, continuous feed water delivery system	1	Monitoring Data Needed
Floor grinding	X	X	X	X			Hand grinder	Attached shroud and HEPA dust collection system	4	25 CFM/inch of wheel diameter OSHA Table I, (xii)
Floor grinding	X	X	X				Electric walk behind unit	Attached shroud and HEPA dust collection system with air flow as required by the manufacturer. Use a HEPA vac to remove loose dust from the floor between passes of grinder.	None	OSHA Table I, (xi)
Floor grinding	X	X	X		X		Riding machine, fuel powered	Integrated, continuous feed water delivery system	None	25 CFM/inch of wheel diameter OSHA Table I, (xi)
Floor Sweeping	X						Broom	Sweeping Compound or wet methods	None	Monitoring Data Needed if using Sweeping compound in OR
Green slab sawing	X		X				Fuel powered walk behind saw	Attached shroud and HEPA dust collection system	1	OSHA Table I, (iv)
Hand held concrete sawing	X	X	X	X			Demo saw, fuel or electric powered	Integrated, continuous feed water delivery system, or Attached shroud and HEPA dust collection system	1,3	OSHA Table I, (xii)
Overhead grinding	X	X	X	X			Hand grinder	Attached shroud and HEPA dust collection system	4	25 CFM/inch of wheel diameter OSHA Table I, (xii)
Pavement Breaking (Hand)	X	X	X			X	Electric demolition hammer	Attached shroud and HEPA dust collection system	1,3	OSHA Table I, (x)
Pavement Breaking (Hand)	X	X	X			X	Pneumatic paving breaker	Continuous water stream at bit point	1,3	OSHA Table I, (x)
Rock Drilling (Hand)	X	X	X		X	X	Jack hammer	Continuous water stream at bit point	1,3	OSHA Table I, (x)
Scabbling	X	X	X		X		Gas or diesel powered	Integrated, continuous feed water delivery system	1,3	OSHA Table I, (xiii)
Shot or bead blasting	X	X	X	X		X	Shot blaster or bead blaster	Attached shroud and HEPA dust collection system	1,3	Air Monitoring Test Results

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Stationary Masonry cutting	X	X	X				Electric masonry saw	Integrated, continuous feed water delivery system	None	OSHA Table I, (i)
Tuck pointing (Hand held mortar sawing)	X	X	X				Electric masonry saw	Integrated, continuous feed water delivery system, or attached shroud and HEPA dust collection system	2,5	OSHA Table I, (xi)
Vertical grinding	X	X	X	X			Hand grinder	Attached shroud and HEPA dust collection system	4	25 CFM/inch of wheel diameter OSHA Table I, (xii)
Wall sawing	X	X	X		X		Electric wall saw	Integrated, continuous feed water delivery system	None	OSHA Table I, (vi)

1. APF 10 respirator required for all indoor work
2. APF 10 respirator required for up to 4 hours work
3. APF 10 respirator required after 4 hours of outdoor work
4. APF 10 respirator required after 4 hours of indoor work
5. APF 25 respirator required after 4 hours for all work

Silica Control Program

Use NIOSH Approved Respirators. The following respirators are examples referred to in Appendix A – Table 1 and this appendix.

APF 10 is the Filtering Facepiece N-100 respirator. Use a P- 100 Respirator when oil is present or when using compressed air.

All tools and dust extractors must be used per the manufacturer's instructions. Failure to do so is an OSHA violation.

Shop vacs, if used, must be equipped with a 0.3µ 99.7% efficient HEPA filter and SHALL ONLY be used when respirators ARE NOT REQUIRED.

APF 10 Examples below:

P-100 examples below:

APF 25 with PAPR example below:

Silica Control Program

Appendix C – OR-OSHA Technical Guidance – Sweeping Compound

Oregon OSHA
A Division of the Department of Consumer and Business Services

Oregon Occupational Safety & Health Division
Technical Guidance

DATE: April 14, 2017

TO: All Oregon OSHA Staff

FROM: Trena VanDeHey, Standards & Appeals Manager

SUBJECT: Division 2, Subdivision Z-Silica, 437-002-1061 Housekeeping.

Question: Is using a dry sweeping compound affected by the rule's prohibition of dry sweeping?

Discussion: A sweeping compound is material that is used to clean floors and reduce the amount of dust created during sweeping. Many of these compounds include silica, so one question is whether the rule would prohibit the use of a sweeping compound that contains silica. Another related issue is if an employer can use a sweeping compound to clean up silica-containing debris. The rule language in question states; "Do not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible."

Answer: The use of a dry sweeping compound does not in and of itself violate the rule because the particle size of the sweeping compound is typically larger than the particle size of concern, unless there is some activity that would fracture the particles.

On the other hand, when there is silica-containing debris, dry sweeping is still prohibited unless other methods, such as wet sweeping or HEPA vacuuming are not feasible. When other methods are not feasible and dry sweeping is the only cleaning method that can be used, there is no prohibition on using a dry sweeping compound, but the initial exposure assessment must include this activity to determine employee exposure levels to silica.

History: TG 2017-1 Issued 4-14-2017

The bolded sections are information in these sections are required, by OSHA, to be compliant with the silica standard. Employers can include additional information, such as medical surveillance, exposure assessment information, and/or training, if it is useful to them, but they are not required to do so under the silica standard.

TILT CONSTRUCTION

Tilt Construction

1. **Responsibilities**
   1.1. **Superintendent**
      1.1.1. The Superintendent is ultimately responsible for managing cranes while on site and managing their safe operation. Super may delegate steps in the standard operating procedure to the Foreman and/or P.E.
      1.1.2. Review Crane Section for Definitions and Roles of Lift Director, Crane Owner, Crane User.
   1.2. **Foreman**
      1.2.1. Confirm completion of required crane use documents by crane user.
   1.3. **Safety program administrator**
      1.3.1. Attend Crane pre-construction meeting.
      1.3.2. Advise Super and Foreman on crane use.

2. S.O.P
   2.1. **Pre-Construction**
      2.1.1. Hold a meeting with crane vendor and tilt subcontractor prior to the crane arriving. The Resource Manager and Safety program administrator must be invited to the meeting.
      2.1.2. Follow Crane Policy and use the required forms.
      2.1.3. Assign the various roles.
      2.1.4. Attend the sub's pre-pick meeting.
   2.2. **Construction**
      2.2.1. Follow Crane Policy.
      2.2.2. All tilt subcontractors are required to submit a request to remove braces in a meeting with the P&C Super, Safety program administrator and/or the Resource Manager.
      2.2.3. All structural components must be complete per OSHA prior to removal. No short cuts are allowed.
      2.2.4. All structural inspections must be signed off.
      2.2.5. P&C Super finalizes request with an email to the sub approving the brace removal.
      2.2.6. Only after approval, can braces be removed.

VEHICLE SAFETY PROGRAM

Vehicle Safety Program

1. Policy Statement

The Vehicle Safety Program establishes guidelines and procedures to be followed to protect the safety of individuals operating any motor vehicle on company business. Protecting our employee drivers, their passengers, and the general public is of the highest priority to the Company.

The commitment of management and employees is critical to the success of this program. Clear communication of and adherence to the program's guidelines and procedures are essential.

Definitions:	See Appendix A for additional definitions.
Company Vehicle:	A motor vehicle owned by or leased to the company, including a temporary replacement vehicle.
Motor Vehicle:	Company vehicle or any other motor vehicle while being operated on company business.
Driver:	Any employee assigned a Company vehicle or who operates a motor vehicle.

2. Program Goals

The primary goal of the Vehicle Safety Program is to maintain a high level of safety awareness and foster responsible driving behavior.

Driver safety awareness and responsible driving behavior will significantly decrease the frequency of Motor Vehicle accidents and reduce the severity of personal injuries and property damage.

Drivers as defined in the program must follow the requirements outlined in the program. Violations of this program may result in disciplinary action up to and including suspension of driving privileges or dismissal.

3. Program Responsibilities

Everyone shares in the responsibility to make the Vehicle Safety Program a success. To avoid confusion or misunderstanding, specific program responsibilities are outlined as follows:

3.1. Drivers are required to:

3.1.1. Read, understand and follow the requirements contained in this program;

3.1.2. Participate in company-sponsored activities or programs designed to improve driver safety;

3.1.3. Maintain a valid driver's license and adhere to license restrictions;

3.1.4. Complete the Driver History Form, and thereby provide signed permission for the company or its designated representative to obtain Motor Vehicle Records, and

3.1.5. Sign the Vehicle Safety Program Acknowledgement Form

3.1.6. **Are required to report all accidents, property and vehicle damage and moving violations to the Safety Program Administrator within 24hrs**.

3.2. Safety Program Administrator Will:

3.2.1. Serve as a technical resource to employees. Ensuring the continuous development of Vehicle Safety Program;

3.2.2. Help evaluate High Risk Drivers and advise management on instituting any additional driving restrictions/limitations;

3.2.3. Evaluate and approve driver training curriculum;

3.2.4. Provide driver training resources;

3.2.5. Revise and disseminate changes to the Vehicle Safety Program;

3.2.6. Issue periodic reports for management review and action, and

3.2.7. Obtain and review Motor Vehicle Reports (MVR) and accident information to ensure that High Risk Drivers are identified and brought to the attention of management.

4. Authorization of Driving Privileges

The Safety Program Administrator will not assign or allow the use of a Motor Vehicle, if:

4.1. The Driver does not have a valid operator's license issued by their state of residence; or if

4.2. The Driver possesses licenses from more than one state, or if;

4.3. The Driver's license is suspended or revoked for any reason.

4.4. In addition, a Driver will be subject to termination if his/her license is revoked, unless a suitable replacement non-driving job in the company is available; or the employee may be subject to other disciplinary action if his/her license is only temporarily suspended.

5. Authorization Vehicle Use

5.1. Personal Use of Company Vehicle

5.1.1. A Company Vehicle, when not used for business purposes, may be driven for personal use AT THE DISCRETION OF SENIOR MANAGEMENT. <u>However, personal use is limited to the assigned Driver</u>.

5.1.2. Senior Management may implement other personal use restrictions, such as radius of operation, at their discretion. However, any such additional restrictions must be in writing and communicated to all affected Drivers.

5.1.3. The privilege of driving a Company Vehicle for personal use is subject to change by the company at any time.

5.2. Unauthorized Use of Company Vehicles

5.2.1. If a Driver allows an unauthorized individual to drive a Company Vehicle, disciplinary action may be taken, up to and including suspension of driving privileges or dismissal of the Driver.

5.2.2. If the unauthorized use results in an accident, in addition to whatever disciplinary action may be taken, the responsible employee may be required to make restitution for the physical damages to the Company Vehicle.

5.3. Non-Company Vehicles Used for Business

5.3.1. Employees who drive Non-Company Vehicles while conducting business for the company is subject to all the provisions and standards of this program.

5.3.2. Additional responsibilities include:

5.3.2.1. Maintaining automobile liability insurance limits of at least $100,000 per person, $300,000 per accident, and $50,000 property damage; but in no case less than the minimum required by law for the state in which the driver resides; (refer to your insurance agent for recommended minimum limit levels and "business use" provisions).

5.3.2.2. Maintain their Non-Company Vehicle in safe operating condition.

6. Driver Motor Vehicle Report Checks

6.1. Initial MVR Checks for Employee Applicants

6.1.1. If an employee is to be a Driver, the Safety Program Administrator will obtain a completed Driver History Form, (See Appendix B) from the applicant and will use the form to obtain an MVR for evaluation.

6.1.2. In the event an employee-applicant is hired and must begin driving on company business prior to receipt of the MVR, the Safety Director must, as a minimum, carefully review the applicant's Driver History Form before granting driving privileges.

Also, each employee-applicant should be informed in writing by the Safety Director that employment is conditional upon receipt of a satisfactory MVR; that is, an MVR not meeting the definition of a HIGH-RISK DRIVER.

6.1.3. If the information on the MVR or Driver History Form indicates that the new employee is a High-Risk Driver, Senior Management may, after careful consideration, grant driving privileges, but only on a probationary basis.

6.1.4. EVERY ATTEMPT SHOULD BE MADE TO SECURE AND EVALUATE An MVR ON EACH NEW DRIVER BEFORE DRIVING PRIVILEGES ARE GRANTED.

6.2. **Existing Employees:** If an existing employee is changing from a non-driving position to a position requiring driving on company business, the employee must complete and sign a Driver History Form.

6.3. Periodic MVR Checks

6.3.1. The Safety Program Administrator will obtain MVRs every two years for all existing Drivers.

6.3.2. In addition to being notified by DMV of any motor vehicle accident or violations, the Company maintains the right to conduct periodic and random review of MVRs at its discretion.

7. Identification of High-Risk Drivers

A Driver will be classified as a High-Risk Driver if the MVR check so indicates, or if it is otherwise determined, that the driver has **one or more** of the following violations within the **last five years**:

7.1. **Failure to immediately report any vehicle damage or collision to the Safety Program Administrator,**

7.2. Conviction for an alcohol and/or drug related driving offense;

7.3. Refusal to submit to a Blood Alcohol Content (BAC) test;

7.4. Conviction of speeding in excess of 25 MPH;

7.5. Criminal conviction (e.g., felony, negligent homicide, manslaughter, hit and run, etc.).

7.6. Other violations incurred in the last three years:

7.6.1. Any combination of three or more moving violations, At Fault Accidents, or Preventable Accidents;

7.6.2. Driving with a suspension, revocation, or administrative restriction;

7.6.3. Leaving the scene of an accident as defined by state laws;

7.6.4. Reckless driving.

7.7. Other violations incurred in the last 12 months:

7.7.1. Any combination of two or more moving violations, At Fault Accidents, or Preventable Accidents.

8. Management Controls for High Risk Drivers

If an employee is identified as a High-Risk Driver, the Safety Program Administrator must choose either Option 1 or Option 2:

8.1. Option 1: Probation

8.1.1. The Safety Program Administrator may do all the following:

8.1.1.1. Place the High-Risk Driver on probation (ending two years from the date of the most recent violation);

8.1.1.2. Obtain an MVR every six months for the duration of the probationary period;

8.1.1.3. Immediately suspend driving privileges if any single repeat violation or an additional violation occurs while on probation as described in Section 5 OR if any terms of probation are violated.

8.1.1.4. Confer with the company executives on any stipulations, operating limitations; or other conditions (for consistency between Districts), such as:

8.1.1.4.1. Loss of all Company Vehicle driving privileges;

8.1.1.4.2. Loss of Company Vehicle driving privileges between work and home;

8.1.1.4.3. Loss of personal use privileges (if applicable – See Section 7);

8.1.1.4.4. Referral of the Driver to the Employee Assistance Program;

8.1.1.4.5. Transfer of the Driver to a non-driving position; or

8.1.1.4.6. Additional driving training.

8.1.1.5. The terms of the probation are to be made to the employee in writing. The employee will be required by signature to signify that he/she has been informed of the probation terms and duration. The signed terms of probation should be kept in the employee's file.

8.1.1.6. If the probationary period has been served and if reinstatement of driving privileges is warranted, the Safety Program Administrator should notify the Corporate Risk Manager.

8.2. Option 2: Suspension of Driving Privileges

8.2.1. The Safety Program Administrator may suspend all company driving privileges. The High-Risk Driver will NOT be authorized to drive a motor vehicle at any time on company business.

8.2.2. This action may result in the Safety Program Administrator either transferring the employee to a non-driving position, if such a position exists, or the employee may be subject to dismissal procedures.

8.2.3. The employee may reapply for company driving privileges after one year of suspension. Application should be made to the Safety Program Administrator. If approved, the employee's driving status will change from suspension to probation. However, reinstatement of driving privileges by the Safety Program Administrator does not

constitute an offer by the company for any Driver position. Normal job posting procedures will still have to be followed.

9. Accident Reporting

9.1. **Safety Program Administrator** – The Driver is required to notify the Safety Program Administrator of any accident as soon as is practical;

PLUS

9.2. **Company Vehicles** – The Driver must call the Safety Program Administrator to verbally report the accident within 24 hrs. The driver must collect all the other driver(s) DL, Insurance and other information. And fill out the attached investigation report form. Contact Brandon Clevenger to begin the repair process.

9.3. **Non-Company Vehicles** – The Driver should call his/her personal automobile insurance carrier;

9.4. **Daily Rental Vehicles** – The Driver should notify the rental company.

9.5. **Accident Investigation**

9.5.1. Driver completes the Accident Investigation Report Form

9.5.2. The program administrator shall review the Accident Investigation for all accidents.

9.5.3. This report should be completed as soon after the accident as is reasonably feasible. Within 24 hours maximum.

9.5.4. To complete the report, the Safety Program Administrator should:

9.5.4.1. Observe the accident scene and damaged vehicle(s);

9.5.4.2. Obtain a copy of the police report, if available;

9.5.4.3. Review the complete Accident Investigation Report obtained from the Driver; and

9.5.4.4. Interview the Driver.

9.6. **Determining Accident Preventability:** The Safety Program Administrator will make a determination as to the preventability of the Accident and record this determination in the applicable section of the Accident Investigation Report Form.

9.7. **Guide for Determining Motor Vehicle Accident Preventability**

This guide can be used to help determine whether an accident was preventable on the part of the driver. It outlines several common types of accidents and questions to consider during the accident investigation process.

Accident investigators are expected to obtain as many facts as possible about an accident and to consider all the circumstances surrounding the accident before determining preventability. If needed, safety groups, trade associations, and organizations such as the National Safety Council can provide assistance in determining whether an accident was preventable.

The generally accepted definition of a preventable accident is one where the driver failed to do everything reasonable to avoid it. Drivers are expected to drive defensively. Which driver was primarily at fault, who received a traffic citation, or whether a claim was paid has little bearing on preventability? If there was anything the driver could have done to avoid the collision, the accident was preventable.

9.8. **General Questions to Consider:** When judging accident preventability, there are some general questions to consider. Further on in this guide are some specific situations to consider.

9.8.1. Does the investigation indicate that the driver considers the rights of others, or is there evidence of poor driving habits that need to be changed?

9.8.2. Does the investigation indicate driver awareness? Such phrases as "I did not see," I didn't think," I didn't expect," or "I thought" are signals indicating there probably was a lack of awareness, and the accident was preventable. An aware driver should think, expect, and see hazardous situations in time to avoid collisions.

9.8.3. Was the driver under any physical handicap that could have been contributory? Did the accident happen near the end of a long day or a long drive? Did overeating contribute to fatigue? Did the driver get prior sufficient sleep? Is the driver's vision faulty? Was the driver feeling ill?

9.8.4. Was the vehicle defective without the driver's knowledge? Was a pre-trip inspection done, and would it have discovered the defect? A car that pulls to the left or right when the driver applies the brakes, faulty windshield wipers, and similar items are excuses, and a driver using them may be trying to evade responsibility. Sudden brake failure, loss of steering, or a blowout might be defects beyond the driver's ability to predict. However, pre-trip inspections and regularly schedule maintenance should prevent most of these problems. If either of these are the cause of the accident, then the accident was probably preventable by the driver.

9.8.5. Could the driver have exercised better judgment by taking an alternate route through less congested areas to reduce the hazardous situations encountered?

9.8.6. Could the driver have done anything to avoid the accident?

9.8.7. Was the driver's speed safe for conditions?

9.8.8. Did the driver obey all traffic signals?

9.8.9. Was the driver's vehicle under control?

10. Specific Types of Accidents

10.1.1. **Intersection Collisions:** Accidents resulting from the driver's failure to yield the right-of-way, regardless of who has the right-of-way, as indicated by stop signs or lights, are preventable. The only exception to this is when the driver is properly proceeding through an intersection protected by lights or stop signs and the driver's vehicle is struck in the rear. Regardless of stops signs, stop lights, or right-of-way, a defensive driver recognizes that the right-of-way belongs to anyone who assumes it and should yield accordingly.

10.1.2. Questions to consider:

10.1.2.1. Did the driver approach the intersection at a speed safe for conditions?

10.1.2.2. Was the driver prepared to stop before entering the intersection?

10.1.2.3. At a blind corner, did the driver pull out slowly, ready to apply the brakes?

10.1.2.4. Did the driver look both ways before proceeding through the intersection?

10.1.2.5. "U" turns disrupt the normal smooth flow of traffic. Accidents which occur while this maneuver is being attempted by the driver are considered preventable.

10.2. **Sideswipes**

10.2.1. Sideswipes are often preventable. Defensive drivers avoid getting into positions where they can be forced into another vehicle or vice versus. Defensive drivers continuously check for escape routes to avoid sideswipes. On two-lane roads, this means a driver should pass another vehicle only when absolutely certain the he or she can safely complete the pass. A driver should also be ready to slow down and let a passing vehicle that has failed to judge safe passing distance back into the lane.

10.2.2. A driver should avoid making sudden maneuvers that could force another vehicle to swerve. If a driver sideswipes a stationary object while taking evasive action to avoid striking another car or a pedestrian, the accident may be preventable. However, you should consider what the driver could have done or failed to do immediately preceding the evasive action to be in the position of no other options.

10.2.3. A driver is also expected to anticipate the actions of oncoming vehicles. Sideswiping an oncoming vehicle is often preventable. Again, evasive action, including leaving the roadway, may be necessary if an oncoming vehicle crosses into the driver's lane.

10.2.4. Drivers are expected to allow other motorists to merge smoothly with them, and to merge smoothly on controlled access highways.

10.2.5. Sideswipes to doors of a vehicle that are opened when the vehicle is in motion are considered preventable.

10.2.6. Drivers are expected to be able to gauge distances properly when leaving a parking place and enter traffic smoothly.

10.2.7. Questions to consider:

10.2.7.1. Did the driver look to the front and rear for approaching and overtaking traffic immediately before starting to pull away from the curb?

10.2.7.2. Did the driver signal before pulling away from the curb?

10.2.7.3. Did the driver look back rather than depend only upon rear-view mirrors?

10.2.7.4. Did the driver start into traffic only when this action would not require traffic to change its speed or direction in order to avoid his or her vehicle?

10.2.7.5. Did the driver yield the right-of-way before changing lanes?

10.2.7.6. Did the driver check to ensure all blind spots were clear before changing lanes or merging?

10.2.7.7. Did the driver use the appropriate signals before changing lanes or merging?

10.3. **Head-On Collision:** A head-on collision with a vehicle traveling in the wrong lane may be preventable if the driver could have pulled off the road or taken other evasive action to prevent a collision. However, the driver should never drive into the other lane to avoid an oncoming vehicle. If the driver swerved off the road to avoid a head-on collision, the accident is non-preventable. The driver in this case made a good defensive driving decision, choosing the lesser of two evils.

10.4. **Loss-of-Control:** Many loss-of-control accidents are associated with adverse weather or road conditions, such as rain, freezing rain, fog, ice, and snow, which all increase the hazard of travel. Oily road film, which builds up during a period of good weather, causes an especially treacherous condition during the first minutes of rainfall. Other times, loss of control is attributed to driving too fast to safely control the vehicle in curves or to react to

unexpected road hazards. Loss of traction can be anticipated, and these accidents usually are preventable. Driving too fast for conditions is the most common reason why these types of accidents are preventable.

10.4.1. Questions to consider:

10.4.1.1. Was the driver maintaining the appropriate following distance for the prevailing road traffic, and weather conditions?

10.4.1.2. Was the driver alert and attentive? Did the driver's work and rest schedule during the previous days suggest that he or she was tired or fatigued?

10.4.1.3. Did the driver maintain adequate distance behind the vehicle while stopped at an intersection?

10.4.1.4. Did the driver give adequate consideration to the possibility that traffic would stop or slow down for an upcoming traffic light, stop sign, or to allow vehicles ahead to turn?

10.4.1.5. Does the driver understand stopping distance requirements, including the time required to perceive a hazard, react, and the time required for the vehicle to come to a full stop once the brakes have been applied?

10.4.1.6. Was the driver driving in a lane that would allow an escape route to avoid an accident?

10.5. **Pedestrian Collision:** All types of pedestrian accidents, including collision with pedestrian coming from between parked cars, are usually considered preventable. There are few instances where the action of pedestrians is so unreasonable that the operator could not be expected to anticipate such an occurrence.

10.5.1. Questions to consider:

10.5.1.1. Did the driver go through congested areas expecting the pedestrians would step in front of the vehicle?

10.5.1.2. Was the driver prepared to stop?

10.5.1.3. Did the driver keep as much clearance between his or her vehicle and parked vehicles as safety permitted?

10.5.1.4. Did the driver stop when other vehicles had stopped to allow pedestrians to cross?

10.5.1.5. Did the driver wait for the green light or stop for the caution light?

10.5.1.6. Was the driver aware of children and prepared to stop if one ran into the street?

10.5.1.7. Did the driver give all pedestrians the right-of-way?

10.5.1.8. Did the driver stop for a school bus that was stopped and properly signaling that passengers were loading or unloading?

10.6. **Animal Collision:** Collisions with animals are normally preventable, unless the movement on the part of the animal was unusual and unexpected. Usually, this type of accident occurs after dark in sparsely populated areas, which are well known to have deer and other animals present. Hence, often the inability to avoid collision is the result of overdriving the headlights, i.e. driving too fast for conditions.

10.7. **Backing a Vehicle:** Backing a vehicle into another vehicle, an overhead obstruction, or a stationary object is normally considered preventable. The fact that someone was directing the driver does not relieve the driver of responsibility to back safely.

10.7.1. Questions to consider:

10.7.1.1. Was it necessary to back?

10.7.1.1.1. Did the driver plan ahead so that he or she could have pulled forward out of the parking space instead of backing?

10.7.1.1.2. Was it necessary to drive into the narrow street, dead-end alley, or driveway from which he or she backed?

10.7.2. If the driver could not see where he or she was backing:

10.7.2.1. Did the driver try to get someone to guide him or her?

10.7.2.2. Did the driver look all around the vehicle before backing?

10.7.2.3. Did the driver back immediately after looking?

10.7.2.4. Did the driver use the horn while backing?

10.7.2.5. Were the back-up lights working?

10.7.2.6. Did the driver look to the rear without relying totally on the rear-view mirror?

10.7.2.7. If the distance was long, did the driver stop, get out, and look around occasionally?

10.7.3. Did the driver back slowly?

10.7.4. Did the driver judge clearances accurately, taking into consideration obstacles to the rear and sides of the vehicle as well as those above and underneath?

10.8. **Parked or Stopped Vehicle**

10.8.1. Doors on the driver's parked vehicle that are damaged when opened on the traffic side are considered preventable accident. The driver is responsible to see that the traffic side is clear of traffic, before any doors on that side are opened.

10.8.2. In most cases, if the driver, while driving, strikes a parked vehicle's opening door, it is considered preventable. Usually the driver can see from a sufficient distance that the parked vehicle is occupied, and should therefore, be prepared to stop, should move closer to the center line or change lanes.

10.8.3. It is a driver's responsibility to park the vehicle so that it will remain stationary. A runaway type of accident is preventable. Blaming an accident on defective parking brakes or other holding devises are inadequate excuses. A good pre-trip inspection and maintenance program will eliminate most opportunities for this type of accident to result from mechanical failure.

10.8.4. An accident is non-preventable when the vehicles was legally and properly parked, or when properly stopped because of a highway patrol officer, a signal, stop sign, or traffic condition. Accidents occurring while the vehicle was double parked or in a "No Parking" zone are preventable.

10.8.5. Questions to consider:

10.8.5.1. Was the vehicle parked on the proper side of the road?

10.8.5.2. Was it necessary to park there or was there a safer, only slightly less convenient place nearby?

10.8.5.3. Did the driver have to park on the traveled part of the highway, on the curve, or on the hill?

10.8.5.4. When required, did the driver warn traffic by emergency warning devices?

10.8.5.5. Did the driver park parallel to the curb?

10.8.5.6. Was it necessary to park so close to an alley or directly across from a driveway?

10.9. **Low-Clearance Obstacles:** Obstructions can be avoided if the driver knows the height and width of the vehicle, pays attention to posted clearances, and takes the time to properly judge clearances.

10.10. **Shifting Cargo and Cargo Damage:** The accident should be considered preventable if the investigation shows a mechanical defect of which the driver was aware, a defect the driver should have found by inspecting the vehicle, or the driver caused by rough and abusive handing. It is a driver's responsibility to secure cargo properly to prevent damage to the cargo. Cargo should be safely stowed to prevent flying objects that can strike or distract the driver.

10.11. **Accident Investigation Review:** The Safety Program Administrator is responsible for reviewing the completed Accident Investigation Report Form and initiating any actions to prevent the reoccurrence of similar accidents by this Driver or other Drivers.

11. Other Reporting Responsibilities of Drivers

11.1. **Supervisor Notification:** Drivers are required to notify the Safety Program Administrator immediately if:

11.1.1. Any illness, injury, physical condition or use of medication that may impair or affect their ability to safely drive a Motor Vehicle; or

11.1.2. The suspension, revocation or administrative restriction of his/her operator's license. If this occurs, the Driver must also immediately discontinue use of the Motor Vehicle.

11.2. **FAILURE TO REPORT A MOVING VIOLATION OR ACCIDENT UNDER THE PROVISIONS OF SECTIONS 3 AND 9 IS A VIOLATION THAT COULD RESULT IN DISCIPLINARY ACTION, UP TO AND INCLUDING DISMISSAL.**

12. Safety Regulations

12.1. **Vehicle Safety Belts:** The Driver and ALL OCCUPANTS are required to wear safety belts when operating or riding in a Motor Vehicle. The Driver is responsible to ensure all passengers are wearing their safety belts. Children are required to be secured in a Department of Transportation (DOT) approved child safety seat, per DMV requirements.

12.2. **Impaired Driving:** A Driver may not operate a Motor Vehicle at any time, when his/her ability is impaired, affected, or influenced by alcohol, illegal drugs, medication, illness, fatigue or injury.

12.3. **Traffic Laws:** All Drivers are required to abide by all federal, state and local motor vehicle regulations, laws and ordinances.

12.4. **Vehicle Condition:** Each Driver is responsible for ensuring that the Motor Vehicle is maintained in safe driving condition. At least daily, a walk-around safety inspection by the Driver is required

Drivers of daily rental cars should check for obvious safety defects before leaving the rental lot and request another vehicle if the first vehicle is not safe to drive. Drivers are encouraged to utilize daily rental cars which have air bags and/or ABS brakes when available in authorized rental class.

12.5. **Use of Cell Phones and Other Electronic Equipment:** The use of technology (cellular phones, tablets/iPads, laptop computers, etc.) has proven to be very effective in improving productivity and customer service. However, there are serious risks associated with usage of this equipment while driving a company or personal vehicle. The availability of this technology is not intended to encourage dangerous behavior during the course of your work or personal life. Responding to texts/pagers, using a laptop computer while driving, and dialing or receiving calls are potentially dangerous. We, therefore, discourage this activity. The intended benefit of this technology is to help you eliminate the search for pay phones or other means of communication and allow you to place calls at a time and place that is convenient and safe for you. Your safety and the safety of others are of the utmost importance to us. You must follow these guidelines to make safety your first priority when behind the wheel of a vehicle:

12.5.1. Do not use your telephone, pager or laptop while driving. If you receive a call, for example, pull off the road and park in a safe place before taking the call. The side of the road is not a safe location. Examples of safe locations are rest stops, parking lots and other areas away from traffic.

12.5.2. If you have taken a call when it is not safe to do so, let the caller know you will return the call as soon as it is appropriate.

12.5.3. Place your calls or use your laptop before you begin your trip or while you are stationary between appointments.

12.5.4. Save potentially stressful or emotional conversations for a time when you are not on the road at all.

12.5.5. Do not dial, take notes, or look up numbers while driving. Know your wireless phone and its features. Carefully read your instructions manual and learn to take advantage of its features. The guidelines also apply to hands free units.

12.6. **Use of GPS/Navigation Systems**

12.6.1. **Selection and Installation of Navigation/GPS Units** – Navigation/GPS units should be chosen with the following characteristics:

12.6.1.1. Laptop Navigation/GPS units should be avoided in favor of built-in navigation units or, if built-in navigation is not available, dedicated Navigation/GPS units.

12.6.1.2. Navigation/GPS should have audible turn-by-turn directions to minimize the need to view the screen while driving.

12.6.1.3. Navigation/GPS units should be chosen and configured so as not to allow making changes in destination or conduct similar on-screen activities while the vehicle is in motion.

12.6.1.4. Navigation/GPS units should be mounted so as to be near the line-of –sight, but not obstructing the driver's view. If not built-in, any wiring to power the unit or used to interface through the vehicle's sound system should be run so as not to interfere with any driver controls (e.g. steering wheel, brake pedal, accelerator).

12.6.1.5. Map databases should be maintained as current as possible to avoid giving wrong instructions.

12.6.1.6. Units should be securely and proper mounted so as to be able to withstand multidirectional forces while the vehicle is in motion.

12.6.2. **Using Navigation/GPS Units**

12.6.2.1. Caution should be taken when viewing the Navigation/GPS screen to make only short glances when the vehicle is moving.

12.6.2.2. Increased following distance is also encouraged when viewing the screen and looking for street signs, addresses, etc.

12.6.2.3. For units equipped with Navigation/GPS text messaging to the drivers' supervisor, the vehicle must be stopped to operate unless the passenger is able to operate the system.

12.7. **Additional Safety Rules**

12.7.1. Drivers may not:

12.7.1.1. Pick-up hitchhikers;

12.7.1.2. Accept payment for carrying passengers or materials (this does not apply to company endorsed carpools);

12.7.1.3. Push or pull another vehicle, or tow a trailer without authorization;

12.7.1.4. Transport flammable liquids and gases unless a DOT or UL approved container is utilized, and only then in limited quantities and only when necessary;

12.7.1.5. Using ignition or burning flares. The preferred method is the use of reflective triangles or battery-operated devices; or

12.7.1.6. Assist disabled motorists or accident victims beyond the level of their medical training; EMT, CPR, Basic First Aid, etc. If a driver is not qualified to provide the above services, he/she must restrict his/her assistance to calling the proper authorities.

Vehicle Safety Program

Appendix A

Glossary of Terms

1. **Accident:** Any incident involving a Motor Vehicle that results in bodily injury or property damage.
2. **Driver:** An employee assigned a Company Vehicle or who operates a motor vehicle.
3. **At Fault Accident:** An accident where the Driver received a moving violation ticket issued by a police officer.
4. **Company Vehicle:** A motor vehicle owned by or leased to the company, including a temporary replacement vehicle.
5. **High Risk Driver:** Any driver on probation or whose driving history meets the criteria outlined in Section 7 – Identification of High-Risk Drivers.
6. **Motor Vehicle:** A Company Vehicle; or any other motor vehicle while being operated on company business.
7. **Motor Vehicle Record (MVR):** A document supplied by the appropriate State Department of Motor Vehicles providing information on motor vehicle violations and license status of a specific driver.
8. **Non-Company Vehicle:** Any motor vehicle used on company business not provided by the company, including privately owned, leased, or rental vehicles. This definition does not include motorcycles.
9. **Preventable Accident:** Any Accident where the Driver could have avoided the accident.
10. **Serious Accident:** Any Accident where there is a fatality, or an injury requiring the transportation of the injured party from the accident site to a medical treatment facility.