



EHS PROGRAM

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STATEMENT OF SAFETY POLICY

It is the policy of Coffman Excavation to maintain a safe working environment for all project employees and the public.

The active support of and participation in the project safety program by all Coffman Excavation project personnel and subcontractors is mandatory. This Construction Safety Manual is one of Coffman Excavation's contract documents and noncompliance with safety specifications will be treated the same as noncompliance with any contract item.

Workers on the project are expected to maintain safe working habits, observe known and posted safety rules and generally conduct themselves in a manner which will not place themselves, fellow employees or the public in danger.

A job must never become so routine or so urgent that safety precautions are ignored. Prevention of personal injury or damage to property and equipment must always remain utmost in the minds of every employee.

Coffman company president

Aaron Hibbs

Aaron Hibbs

PREFACE PURPOSE AND SCOPE

The COFFMAN EXCAVATION EHS PROGRAM is one of the Coffman Excavation Contract Documents. Subcontractors are required to assure that all employees and their suppliers/vendors, while on the Work Site and in the conduct of Coffman Excavation contracts, comply with the provisions of this program.

The Occupational Health and Safety Act, the Oregon Safe Employment Act (and future revisions or additions thereof) are required by law to be followed on all work. These regulations are **MINIMUM** standards.

In an effort to maintain the highest standard of safety possible to both public and project employees, these standards have been supplemented by safety and health provisions contained in this manual.

It is fully realized that these additional provisions may not address some unforeseen work site hazards or may be impractical for a subcontractor to comply in every situation. Revisions to the program's safety and health section will be made as required to meet the changing needs of the Project--as long as the total loss control objectives are not compromised and meet with the approval of the Coffman's management team.

The provisions of this program do not negate, abrogate, alter, or otherwise change any requirements of OSHA, OSEA and any other applicable laws.

The Subcontractor will be expected to familiarize himself with the contents applicable to his operation. The provisions of the Safety Manual will be strictly enforced. Noncompliance with the Safety Manual will be treated the same as noncompliance with any Contract provision. Willful or repeated noncompliance shall result in suspension of part or all work.

DEFINITIONS

The following definitions apply for the purpose of the EHS Program.

1. **ACCIDENT** - Any unexpected event that interrupts or interferes with the orderly progress of the production activity or process that results in bodily injury or property damage.
2. **ACCIDENT CONTROL PROGRAM** - A program designed to provide safety control for the protection to life and health of employees and other persons for the prevention of damage to property, materials, supplies and equipment.
3. **APPROVED** - A method, equipment, procedure, practice, tool etc. which is sanctioned, consented to, confirmed, or accepted as good or satisfactory for a particular use or purpose by a person or organization authorized to render such approval or judgment.
4. **AUTHORIZED PERSON** - A person approved or assigned by the employer to perform a specific type of duty or to assume a specific responsibility.
5. **CATASTROPHE** - An accident in which two or more employees are fatally injured; or five or more involved employees go to, or are each sent to, or are admitted to a hospital or an equivalent medical facility.
6. **COMPETENT PERSON** - A person who, by training and/or experience is capable of performing specifically assigned duties and responsibility. Further, he/she is capable of recognizing existing and predictable hazards or conditions which are unsanitary, hazardous or dangerous and is authorized to initiate prompt corrective action.
7. **CONSTRUCTION SAFETY SUPERVISOR** - A contractor's employee or subcontractor's employee who is responsible for job site safety, safety education of job site employees and for the reporting of all insurance claims.
8. **EMERGENCIES** - For the purpose of the Accident Control Program, emergencies are classified as follows:
 - a. Any serious accident involving one or more workers.
 - b. Any serious accident involving a member of the public.
 - c. Any other occurrence, which would require immediate protection of life and property.
 - d. Collapse of a substantial part of any permanent structure upon the work site.
 - e. Collapse of equipment used in the course of construction.
 - f. A fire requiring the response of the local fire department.
9. **FIRST AID** - Any one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, or similar injuries, which do not ordinarily require medical care. Such one-time treatment and subsequent observations is considered first aid even though provided by a physician or registered professional personnel.
10. **HIGH VOLTAGE** - Refers to all voltages of 600 volts or greater, unless otherwise defined in the text of this manual.
11. **IMMINENT DANGER** - A condition, practice, or act which exists in any place of employment and could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures otherwise provided the Act.

12. INCIDENT/OCCURRENCE - An unplanned event that interrupts the orderly completion of an activity that may or may not include property damage or bodily injury.
13. OREGON SAFE EMPLOYMENT ACT (OSEA) - An act to assure as far as possible safe and healthful working conditions for every working man and woman in Oregon through the development, administration and enforcement of safety and health laws and standards in accordance with the Federal Occupational Safety and Health Act of 1970.
14. REPORTABLE OCCUPATIONAL INJURIES OR ILLNESS - For the purpose of this project, a reportable accident will be one which requires more than one visit to the first aid facility, or which requires one or more trips to a doctor, clinic or hospital.
15. EHS DIRECTOR, PROJECT ENGINEER or PROJECT MANAGER - Coffman Excavation personnel assigned to act as its authorized agent in the administration of the specific contract.
16. SAFETY COORDINATOR - The Coffman Excavation Safety Officer Representative.
17. SUBCONTRACTOR - Any person, firm or corporation other than the employees of Coffman Excavation, who contracts with Coffman Excavation to furnish labor, materials, or labor and materials under this Contract.
18. SUPPLIER/VENDOR - Those entities whose sole responsibility to the project is the delivery of goods or materials exclusively of direct labor.
19. UNSAFE CONDITION - Any physical state which deviates from that which is acceptable or correct in terms of its past production or potential future production of personal injury, illness and/or potential future production of personal injury, illness and/or damage to property. Also, any physical state, which contributes to a reduction in the degree of safety normally present. All employees have the right and the obligations to stop work seen as unsafe.
20. WORK SITE - The area enclosed by the Limit of Work indicated in the Project Drawings and boundaries of local streets and public easements in which the Subcontractor is to perform the work under the Contract shall also include areas obtained by the Subcontractor for use in connection with the Contract, when contiguous to the Limit of Work.

CHAPTER 1

SAFETY PROGRAM RESPONSIBILITIES

A. COFFMAN EXCAVATION

1. Insofar as the Accident Control Program is applicable, Coffman Excavation Project Managers, Projectengineers and Supervisors will provide general assistance as requested to guide all other participants in fulfilling the objectives of the Accident Control Program for the Project.
2. Advice from any representative of Coffman Excavation in no way relieves, alters, changes or amends any expressed, implied or inherent agreements or legal responsibilities of any other participant to adequately and effectively provides all necessary means for public and employee safety. Each individual is responsible for implementing prudent safety measures recognized by members of the construction industry or suggested by provisions of the applicable governmental regulations and standards that are germane to the construction industry and are specifically relative to the Project in whole or part.
3. The Coffman Excavation Safety Officer and/or Project Superintendent and/or Project Manager or his designee will take, at any time, all necessary action required when situations are reportedor observed which create or could create substantial hazards to life or property.

B. COFFMAN EXCAVATION AND THEIR SUBCONTRACTORS WILL BE REQUIRED TO:

1. Comply with all the safety requirements established by this program, which exceed applicablefederal and state safety and health requirements.
2. Comply with all applicable work site safety rules subsequently established by the Project Engineer or Project Manager.
3. Provide a written safety program, which must be in compliance with this program within three (3)weeks following award of subcontract. The written safety program will:
4. Detail the control program they intend to use for all health and safety peculiar to his/her work athis/her work site.
5. Designate the supervisory person who will be responsible for job site safety, job site safety inspections, safety education of job site employees and for the reporting of all insurance claims.
6. Schedule weekly “toolbox” safety meetings to be held by the job foreman or supervisor with all employees. Records should be kept of those meetings showing date, attendance and subject matter covered. The Coffman Excavation Project Engineer or Project Manager shall be advised of the time and location for these scheduled meetings at least two days in advance.
7. Establish a visitor hazard control/protection program and job security, if applicable.
8. Establish and conspicuously post an emergency procedure which will contain appropriate names andtelephone numbers for personnel injuries, fire and severe weather-related conditions.
9. Comply with the program for formal supervisory accident investigation reports on employee injuriesrequiring off-site medical attention and property or personal injury involving non-employees.
10. Comply with the program established for first aid treatment and record keeping for all employees onthe Project.

11. Require that good housekeeping procedures are maintained at all times.
12. Require that frequent safety inspections be conducted in the work area.
13. Require the investigation and reporting of all accidents, injuries or incidents and to file a full report as established.

C. COFFMAN EXCAVATION PROJECT ENGINEER, PROJECT MANAGER OR AUTHORIZED DESIGNEE WILL:

1. Monitor how the Subcontractor and our crews plan and execute their work, which shall be in compliance with the State objectives of the Accident Control Program and applicable laws.
2. Authorize prompt remedial action to correct violations of the Safety Program reported or observed.
3. Have the authority to take immediate action, including stopping work, to correct conditions involving imminent danger.
4. Direct prompt remedial action to correct substandard or illegal safety and/or health conditions reported or observed.

D. THE COFFMAN EXCAVATION SAFETY COORDINATOR WILL:

1. Review of the Subcontractor's Safety Program after receipt of the Contract.
2. Actively participate in preconstruction conferences to discuss safety considerations of job site hazards, planned construction activities, vehicle traffic control, etc. with contractors.
3. Have the authority to take immediate action, including stopping work, to correct conditions involving imminent danger.
4. Direct prompt remedial action to correct substandard or illegal safety and/or health conditions reported or observed.
5. Review investigation reports of injuries and/or accidents and recommend corrective action to the Subcontractor.
6. Make periodic safety inspections and surveys of the Project site.
7. Be available to the Subcontractor's designated safety supervisor to advise in the selection of personal protective clothing, safety equipment, guards, etc. to assist in the solving of safety problems, as required.
8. Assist in establishing procedures for the reporting of all accidents, injuries and incidents.
9. Advise in the implementation of the emergency procedures outlined herein.
10. Has the responsibility of Claims Management.

CHAPTER 2 ACCIDENT REPORTING AND FIRST AID PROCEDURES

The Subcontractor and all other participants on the construction project shall instruct their employees and all other concerned personnel in the following procedures to be used if a work is injured.

SERIOUS INJURY OR FATALITY

Except in the case of overriding danger to the life of such a worker, do not move him/her if:

- A. He/she has suffered a fall.
- B. There is an indication of a broken bone.
- C. There may be injury to the back or head.

Report the matter immediately to the immediate supervisor who shall arrange for first aid treatment or other required emergency medical treatment.

In the event of serious injury or death, the supervisor of the employee concerned is to arrange for the necessary treatment. The incident shall be reported promptly to the Project Superintendent or Project Manager and to the Coffman Excavation Safety Coordinator's office at (503) 656-7000.

The emergency telephone number is 9-1-1

Note: The emergency number will be applicable for police, fire and ambulance response. And may be superseded by site specific emergency contact numbers such as Intel, Boeing, PDX, etc.

MEDICAL TREATMENT

The employer, his/her responsible supervisor and foreman shall assure that any of his/her employees who suffer a job-related injury shall receive first aid and medical attention consistent with and as required by law.

ACCIDENT REPORTING PROCEDURES

The employer of any injured employee shall be required to complete the First Report of Injury Form (801) as required by the Workers' Compensation laws of the State of Oregon.

The supervisor of the injured employee shall be required to fill out the Supervisor's Accident Investigation Report form for an accident requiring medical treatment.

The Subcontractor and other participants in the Accident Control Program shall instruct employees and other concerned personnel in the following procedures if there is loss or damage to property of others, including damage to equipment or tools being used at the work site.

- A. Promptly report the loss or damage to the Coffman Excavation site Superintendent and the Project Manager.

****All participants in this Accident Control Program shall cooperate fully in the investigation of any and all accidents, whether to persons or property. ****

CHAPTER 3

SUPERVISOR'S ACCIDENT INVESTIGATION PROCEDURES

For the purpose of this program, a reportable accident will be one which requires more than one visit to the first aid facility, or which requires one or more trips to a doctor, clinic or hospital.

SUPERVISOR RESPONSIBILITY

When a reportable accident occurs, it is the responsibility for the injured employee's immediate supervisor to properly investigate the accident, complete a Supervisor's Accident Investigation Report and take the immediate action necessary to prevent the recurrence of an accident of a similar type.

COMPLETION OF FORM

The Supervisor's Accident Investigation form must be completed in its entirety.

- A. Description of Accident - The supervisor must be specific and report honestly on the sequence of events involved. The description need not be lengthy in nature but must contain sufficient information to adequately describe what happened.
- B. Accident Causes - Unsafe Act - are the human elements of accidents. There may be no unsafe acts involved in an accident, one, two or any number of unsafe acts involving the injured person and/or other workers.
 - *Some examples of unsafe acts are disregard of safety instructions; failing to tie-off safety lanyard; failure to wear personal protective equipment--did not wear safety glasses; unsafe lifting--should have obtained help or assumed proper position.
- C. Unsafe Conditions - These are the physical elements of accidents involving tools, equipment, materials or facilities.
 - *Examples of unsafe conditions are: an unprotected floor hole or unprotected floor opening; defective ladder; insufficient lighting; rough or uneven walking or working surfaces; poor housekeeping.
- D. Explanation of Corrective Action Taken - This portion of the Supervisor's Accident Report, when properly completed, is developed as the result of the supervisor's careful and thorough investigation of the accident.
 - 1. In order to apply the proper corrective measures to eliminate an unsafe act, a supervisor must know why the employee performed unsafely.
 - 2. The supervisor must also know when the unsafe condition was present or what circumstances allowed the unsafe condition to exist in the first place.
 - 3. It is important that the investigating supervisor be specific as to the corrective action taken by him if future accidents of this type are to be prevented.

CHAPTER 4 SAFETY STANDARDS AND PRACTICES

CHAPTER 4.1- GENERAL SAFETY AND HEALTH PROVISIONS

1. Coffman Excavation employees and our Subcontractors shall adopt a program for the performance of their work designated to promote its orderly and expeditious progress and to insure its safe completion within the prescribed time.
2. Employees and Subcontractors who are found to be intoxicated, or who have been found partaking of or who appear to be under the influence of intoxicating or alcoholic beverages or drugs while engaged in the performance of their duties, or during their meal periods, shall be removed from the work site. Employees who are under the care of a doctor and taking prescription drugs should inform their supervisor of same to determine if restrictions should be imposed.
3. Prior to the start and during the course of any work in a new area, the Coffman Excavation and their Subcontractors shall make a thorough survey of the entire work site to determine all potential hazards on the job. Employees shall be made aware of these potential hazards and shall be instructed in procedures and the use of equipment for their protection. Coffman Excavation and/or their Subcontractors must verify the location and condition ("live" or "dead") of all utilities on or near his/her work site, and take the necessary precautions to protect his employees, the general public and the utility.
4. Each employee shall inspect their work area on a daily basis.
5. At least one person who has valid certificates in first aid training from either the U. S. Bureau of Mines, the American Red Cross or equivalent training that can be verified by documentary evidence, shall be available at the work site to render first aid. Further, a minimum ratio of one such qualified person to 50 employees shall be maintained throughout the course of construction. A suitable emblem shall be affixed to the rear of hard hats or other location for identification.
6. First aid supplies approved by a physician licensed to practice in the State of Oregon shall be accessible for immediate use.
7. A telephone shall be made available at the work site before construction begins. The telephone number and locations of emergency facilities including, but not limited to emergency hospitals, physicians, ambulance service, police and fire departments, shall be posted in conspicuous locations at the site and all telephone locations.

CHAPTER 4.2- PERSONAL PROTECTIVE EQUIPMENT

- A. In support of the Coffman Excavation policy of providing employment free from recognized hazards, each project will be analyzed for potential exposure to determine employee protective equipment requirements. Protective equipment will only be used when the hazard cannot be eliminated by other means.
 1. Head Protection
 - a. Hard hats will be worn at all times in the construction area. This is to protect against possible head injury from impact, falling objects or electrical shock.
 2. All purchase orders will reflect compliance with American National Standards Institute (ANSI) Z89.1, "Safety Requirements for Industrial Head Protection"
 3. Helmets for high voltage electrical shock protection will comply with ANSI Z89.2.
- B. Hearing Protection
 1. Hearing protection devices will be provided and worn whenever the noise exposure exceeds 85Db for an 8-hour period.

2. Since measuring devices are not normally available at the work site, hearing protection will be issued and worn whenever high noise activities such as jackhammer operations are taking place.
3. The noise level is likely too high if it is necessary to shout while trying to conduct a normal conversation.

C. Eye Protection

1. Safety glasses will be worn at all times in the construction area. Other eye and face protective equipment will be utilized whenever there exists an extreme hazard due to physical, chemical or radiation agents.
2. All eye and face protection equipment will meet the standards of ANSI Z87.1.
 - a. Prescription glasses do not normally meet the ANSI standard.
3. When flying particles present a hazard to the face as well as the eyes, a full-face shield and foam-lined safety glasses are required.
4. Approved eye and face protection shall be provided and worn when on an active job site. Dangers including but not limited to:
 - a. Blowing with compressed air or steam.
 - b. Boring, drilling or reaming with hand tools.
 - c. Chopping with hatchet or ax.
 - d. Cranking gasoline engine with rope or chain.
 - e. Cutting or breaking asphalt, cement ballast, concrete, glass, stone pipe or other hard items.
 - f. Driving tie plug or wooden wedge.
 - g. Gas cutting, welding or heating
 - h. Holding up end of tie being spiked.
 - i. Operating power saw, lathe, cutter, punch, drill, riveter or driver.
 - j. The Welding.
 - k. Working with or in the area of a grinding wheel or band saw.
 - l. Grinding with power saws.
 - m. Saw cutting.
2. Welding and cutting activities require the use of shaded lenses to suit the radiation generated. Flash glasses will be worn by personnel in the immediate area when flash-burn potential exists (welders or helpers working side by side).

D. Foot Protection

1. Safety toe work boots in good repair, made of leather or equally firm material, will be worn at all times in the construction area. This is to protect from injury to feet due to falling or moving objects, burning, cutting, abrasives, and penetration, etc.
 - a. Canvas type tennis shoes are prohibited.
 - b. Leather like material that extends above the ankle
 - c. Open toe or heel sandals are prohibited.
 - d. Romeo or Romeo type shoes are prohibited
 - e. Soles and heels will be made of a material, which will not create a slip hazard.
 - f. Safety shoes are required at all job sites.

CHAPTER 4.3-HOUSEKEEPING

- A. Coffman Excavation and their Subcontractor shall at all times maintain the premises from accumulations of waste materials, trash and debris caused by his work.
- B. Pre-job planning shall include consideration of housekeeping plans and will include methods and equipment or tools necessary.
- C. Supervisors will instruct their crews to maintain good housekeeping.
- D. Each work area shall be cleaned by the crew as often as necessary to remove fire and safety hazards discovered through regularly scheduled inspections.
- E. Stored and stacked materials shall be kept orderly, properly stacked, choked and secured.
- F. Any protruding nails, etc. shall be bent, removed or clinched immediately.
- G. Oil, grease and waste spills shall be cleaned up immediately or covered with approved absorbent material.
 - 1. Spill kits are available in all fleet trucks and site conex.
- H. All tools, scaffolding, rubbish and materials shall be removed from the work area at the completion of the work.
- I. Walkways, vehicle travel ways, ramps, railing and stairways shall be kept free from debris, properly installed and maintained. Depressions and potholes in vehicle travel ways or walkway surfaces on the work site shall promptly be filled and graded.
- J. Adequate lighting shall be provided in or around all work areas, passageways, stairs, ladders and other areas used by personnel.
- K. Unsafe conditions generated by others reported.
- L. All holes need protected and/or covered.
- M. Equipment will be free of all debris in the cab.
- N. Working surfaces (pedals/levers) clean and unobstructed.

CHAPTER 4.4

SAFE PRACTICES FOR THE USE OF LADDERS, STAIRWAYS, AND ACCESS

Introduction

Many workplace injuries can be attributed to improper use of ladders, stairways, and other means of access. It is the policy of Coffman Excavation to ensure all ladders, stairways, and other means of access are properly inspected, maintained, and used in accordance to manufacturers' specifications, OSHA rules, and the company-specific rules listed within this policy. The following safety rules and procedures shall be reviewed by all affected employees.

- A. General Access requirements--Stairways
- B. Stair rails and handrails ----
Ladders (portable and fixed)
- C. General Access Requirements
 - 1. Stairways
 - a. Stairways should 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.
 - b. All stairways shall have rigid handrails mounted to help ensure safe use.

- c. 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.
 - d. Adequate lighting shall be provided in all stairways/stairwells.
 - e. Stair treads shall be constructed of non-slip materials or have a non-slip surface provided.
 - f. All personnel shall be prohibited from carrying heavy/awkward objects, which could cause imbalance or reduced line of sight, up or down stairs.
 - g. All personnel shall be required to report unsafe stairways to their supervisor immediately.
 - h. Unsafe stairways shall be cordoned off and not used until the condition is corrected.
- D. Use of All Ladders (Including Job-Made Ladders)
- 2. Only Type IAA, IA, I, and II ladders may be used in the workplace.
 - 3. All manufacturer warning labels must be legible and affixed to the ladder.
 - a. 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.
 - 4. 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.
 - 5. Ladders must be maintained free of oil, grease, and other slipping hazards.
 - 6. Ladders may not have after-market opaque coatings.
 - 7. Ladders must not be loaded beyond the maximum intended load for which they were built or beyond them
 - a. Manufacturers' rated capacity.
 - 8. Ladders must be used only for the purpose for which they were designed.
 - 9. 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
 - a. 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.
 - 10. Ladders must be used only on stable and level surfaces, unless secured to prevent accidental movement.
 - 11. 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.
 - 12. 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.
 - 13. The area around the top and bottom of ladders must be kept clear for safe access and egress.

14. The top of a non-self-supporting ladder must be placed with two rails supported equally, unless it is equipped with a single support attachment.
15. Ladders must not be moved, shifted, or extended while in use.
16. Ladders must have nonconductive side rails if they are used where the worker or the ladder could contact exposed, energized, electrical equipment.
17. The top two steps of a ladder must not be used unless designed for such.
18. 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.
19. 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.
20. Single-rail ladders are not allowed.
21. When ascending or descending a ladder, employees must face the ladder.
22. Three points of contact must be maintained while ascending and descending.
23. An employee on a ladder must not carry any object or load that could cause the worker to lose balance and fall.

E. Defective Ladders

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.
2. Ladders with structural defects must be removed from service.
3. Defective fixed ladders are considered removed from use when they are:
 4. Immediately tagged with “Do Not Use” or similar language,
 5. Marked in a manner that identifies them as defective, or
 6. Blocked (such as with a plywood attachment that spans several rungs).

F. Training Requirements

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:
 - a. Nature of fall hazards in the work area.
 - b. The proper construction, use, placement, and care in handling of all stairways, ladders, and any other access system used at jobsite or facility.
 - c. 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.

CHAPTER 4.5 CONFINED SPACE PROGRAM

A. Space Determination

1. This confined space entry (CSE) program is in accordance to Occupational Health and Safety Administration (OSHA) regulations. The Oregon OSHA (OR-OSHA) enforces Federal Confined and Enclosed Space requirements as contained in 1910.269 and Oregon Administrative Rules OAR 437-002- 0146, which replaces Division 2/J 1910.146. All personnel must meet the training requirements before entering or acting in a support role in the entry of a regulated confined space.
2. This document delineates the requirements for entry into Alternate-permit, permit-required, and enclosed spaces. In addition, this document provides when and how a permit-required space can be entered using alternative entry procedures as defined in OAR 437-002-0146.

B. Confined Space (See Appendix A)

1. A confined space shall meet all of the following criteria:
 - a. The space is large enough and configured so that an employee can bodily enter and do work.
 - b. The space has limited or restricted means of entry or exit.
 - c. The space is not designed for continuous employee occupancy.
2. An Alternate 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. A confined space can be entered using alternate entry procedures if the employer can demonstrate that:
 - a. The only hazard posed by the permit space is an actual or potentially hazardous atmosphere.
 - b. Forced air ventilation alone will maintain the permit space for entry.
 - c. Monitoring and inspection data is available to employees.

Definitions

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.

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.

Confined space: any space which is

- A. Large enough and so configured that an employee can bodily enter and perform work
- B. Has limited or restricted means of entry or exit.
- C. It is not designated for continuous employee occupancy.

Alternate entry: confined spaces where the only hazard is atmospheric and can be controlled by ventilation alone. They can only be made safe for entry if the employer:

- A. Demonstrates that the only hazard posed by the permit space is an actual or potentially hazardous atmosphere.
- B. Demonstrates that forced air ventilation *alone* will maintain the permit space safe or entry.
- C. Develops monitoring and inspection data to support (1) and (2) above, and makes the ~~supp~~ data available to employees.
- D. 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.

Permit-required: confined space which

- A. Contains or has the potential to develop a hazardous atmosphere
- B. Contains a material with potential for engulfment
- C. Has a configuration such that an entrant could be trapped or asphyxiated
- D. Contains any other recognized serious safety or health hazard(s)

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.

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 normal conditions does not contain a hazardous atmosphere but may contain a hazardous atmosphere under abnormal conditions. The space shall be 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).

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

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

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.

Entry supervisor: the person (such as an employer, foreman, or lead man) 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.

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.

Hot work: any operation that could provide a source of ignition, such as riveting, welding, cutting, burning or heating.

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).

Lower explosive limit (LEL): the minimum concentration of a combustible gas or vapor in air that will ignite if an ignition source is present.

Regulated space: any enclosed, confined, or permit-required confined space.

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.

Self-rescue: the ability of the entrant to remove themselves from the confined space under their own power.

Short duration entry: entry into an enclosed space for a period of time of 10 minutes or less.

Standard duration entry: entry into an enclosed space for a period of time in excess of 10 minutes.

C. Permit-Required Confined Space (see Appendix B)

1. Confined space is a permit-required confined space if it meets *any* of the following criteria:

- a. Contains or has the potential to contain a hazardous atmosphere
- b. Contains a material that has the potential for engulfing an entrant (e.g. being trapped in liquid or solid material)
- c. It is configured so that an entrant could be trapped or asphyxiated by inwardly converging walls or sloping floors
- d. Contains any other recognized serious safety or health hazard that can inhibit an entrant's ability to self-evacuate

D. Alternate Entry of Permit Spaces

1. The entry supervisor may determine that a permit-required confined space may be entered without a permit when the following conditions can be met:
2. All hazards have been eliminated.
3. All physical hazards have been eliminated and all atmospheric hazards controlled with ~~or~~ forced-air ventilation to maintain a safe atmosphere in space.
4. Monitoring and inspection data support the determination of a safe atmosphere.

E. Roles and Responsibilities Prior to any entry approval is needed from General Superintendent or Corporate Safety Director. 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.

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:
 - a. Know the hazards within the regulated space and signs of exposure to hazards within the space
 - b. Monitor the entrants' behavior
 - c. Track the number of workers in the space and restrict space access to only authorized entrants
 - d. Maintain constant contact with the entrant(s)
 - e. Protect entrant(s) from external hazards
 - f. Remain at the entrance, unless relieved by another authorized attendant
 - g. 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.
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 into any regulated space an entrant must:
 - a. Know the hazards within the space and the exposure signs for each hazard
 - b. Demonstrate the use of personal protective equipment (PPE)
 - c. Keep in contact with the assigned attendant. If contact is lost with the attendant, the entrant must leave the regulated space.
 - d. Alert the attendant to any observed hazard or condition not allowed by the permit
 - e. Instantly obey any order to evacuate the regulated space
 - f. Initial the CSE permit or information sheet to verify it is in place
 - g. Verify that required air sampling has occurred
 - h. Follow all applicable safety rules concerning the specific job
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:
 - a. Know the hazards that may be faced during entry, including information of the mode, signs, symptoms, and consequences of the exposure
 - b. Personally verify, before endorsing the permit and allowing entry, that:
 - c. Appropriate entries have been made on the permit, and
 - a. All tests specified by the permit are in place.
 - d. Stop the entry and cancel the permit as required. Verify that:
 - i. Rescue services are available.
 - ii. Means of summoning rescue services are operable.
 - e. Remove unauthorized individuals who enter or attempt to enter the regulated space during any operation.
 - f. At permit-specified intervals, and whenever transferring responsibility, determine that:
 - i. Entry operation remains consistent with the terms of the entry permit, and
 - ii. Acceptable entry conditions are maintained.

4. **Responsible Supervisor:** The supervisor responsible 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:
 - a. Maintain the CSE logbook and keep cancelled permits for at least one year in the Safety Directors office
 - b. Review submitted CSE permit(s) or information sheet(s) for accuracy
 - c. Approve the CSE permit or information sheet before air sampling is done
 - d. Retain the original CSE permit or information sheet and issue copies of the permit based on the number of entry points
 - e. Ensure that the entry supervisor has cancelled the CSE permit or information Sheet(s) and turned-in all issued copies of the permit.
 - f. Conduct a monthly review of the CSE permit or information sheet logbook to ensure that no "in use" permit has expired
5. **Outside Contractors and Their Employees**
 - a. The supervisor responsible ensures that outside contractors follow all applicable Oregon-OSHA regulations and coordinates with staff as necessary.
 - b. The supervisor responsible must:
 - i. Inform all contractors that work will be in a permit-required confined or enclosed space
 - ii. Apprise the contractor of known hazards and experience with the space
 - iii. Apprise the contractor of any employee protection precautions or procedures used in or near the areas that contractor personnel may be working
 - iv. Debrief the contractor at the end of the entry operation
 - v. Personnel observing unsafe contractor work practices in or around confined spaces are responsible for informing the supervisor responsible and/or the safety office.
 - vi. 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.

F. **Procedures**

1. 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:
 2. Non-permit confined space entry
 3. Permit-required confined and enclosed space entry
 4. Alternate entries
 5. Emergency exit and rescue entry
 6. Alternate-permit confined space entry
 - a. Alternate-permit confined spaces do not require a CSE permit and must meet the following criteria:
 - i. The actual or potential hazard in the confined space is atmospheric.

- ii. Air monitoring records demonstrate that natural ventilation or continuous forced air ventilation will maintain a safe atmosphere.
 - iii. An entrant will wear a personal atmospheric monitor with audio and visual alarm that activate when levels exceed limits.
 - iv. Data documenting conditions must be recorded and maintained on a Alternate-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.
 - v. The monitoring data is available to all confined space entrants.
- G. Permit-Required Confined Space Entry (CSEA CSE permit must be completed and authorized before anyone may enter a permit-required confined space. CSE permits must be issued and authorized by the 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.
1. The entry supervisor (who may double as an entrant or attendant) fills out the CSE permit (Attachment A), including assigning roles to each individual in the work party
 2. The nature of the hazards in the confined space will determine the safety equipment necessary for each specific entry. The following should be considered:
 3. 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.
 4. 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.
 5. 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.
 6. A means of communication between the attendant and the entrant(s) and the attendant and the rescue team must be provided, operational, and maintained.
 7. The attendant informs the identified emergency contact of which permit-required confined spaces will be entered and the expected duration of the entry.
 8. 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.
- H. Test the atmosphere in the confined space to ensure 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.
1. Carbon monoxide is <35 ppm
 2. Hydrogen sulfide <10 ppm
 3. Lower explosive limit (LEL) < 10%.

4. Oxygen is >19.5% and <23.5%
- I. If ventilation does not remove the atmospheric hazard, find and eliminate the source of the hazard before entry.
 1. Entry supervisor shall advise all on-site personnel of the potential hazards. Problems encountered during entry will be noted on the CSE permit.
 2. The entry supervisor shall ensure that all of the CSE permit requirements for safe entry is 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.
 - J. Continuous monitoring will be performed during all entries. Ventilate the space from top to bottom, ensuring the following:
 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.
 2. Continue ventilation until all entrants have left the space.
 3. 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.
 4. Extra protective equipment may be obtained, and a rescue team may be contacted.
 5. 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).
 - K. Tools used in the regulated space will be restricted as follows:
 1. Electric tools will be properly grounded, or ground fault circuit interrupters (GFCI) will be used in the regulated space.
 2. Lighting will be low voltage and either vapor proof or have GFCI protection.
 3. Non-sparking tools will be used if the atmosphere contains or may contain a flammable or explosive mixture.
 - L. 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:
 1. Tell entrants to leave the confined space immediately (self-evacuate).
 2. Evaluate the space to learn how hazardous atmospheres occurred.
 3. Determine measures to protect workers from hazardous atmospheres before reentry.
 - M. If an entrant moves through an area where the atmosphere cannot 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.
 1. The attendant will ensure that all entrants comply with all CSE permit conditions, including PPE.
 2. 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:
 3. Welders will use mechanical ventilation and continuous air monitoring to protect themselves and other personnel in the area from toxic metal fumes.
 4. 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.

5. 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.
6. 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.
7. 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. If pre-work notice is provided, notify the identified emergency contact that the confined space work has been completed.
9. Submit the cancelled CSE permit to the supervisor responsible for record storage.

O. Alternate Entry Procedures

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.
2. Show, without entry, that the space poses no actual or potential atmospheric hazards, and all hazards within the space are eliminated.
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.
4. The entry supervisor must justify and approve alternate entry using a CSE information sheet including location and date. The CSE information sheet must be available to each employee entering the space.
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.

P. Emergency Exit and Rescue Entry

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:

1. The attendant orders evacuation.
2. An air monitor alarm is activated.
3. The entrants believe they are in danger.
4. An emergency rescue is the removal of the entrants who have been injured, fallen unconscious, or for any reason are 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.

5. 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.
6. Local fire departments are the designated rescue teams depending on the physical location of rescue and if an agreement has been established. Most fire departments will NOT accept this responsibility
7. 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. 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.
9. 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.
10. Ensure 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.
11. Rescue with comparable equipment on the type of space being entered must have been practiced in the previous 12 months.
12. Tri-pod retrieval system will be used on all entrants.

Q. Requirements

1. Preventing Unauthorized Entry

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. Proper barricade and signage will assist with this.

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.

3. Safety Equipment

- a. 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.
- b. 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.

- c. Atmospheric monitoring equipment shall be calibrated and maintained. The equipment is to be used according to the most current procedures provided by the manufacturer.
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 pedestrians, vehicle, and other barriers are in place to protect entrants from external hazards.
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.)
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.
7. Training Competencies
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.
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:
 - a. Enclosed and Confined Space Entry Program
 - i. Demonstrate knowledge in the purpose and procedures contained in this program.
 - b. Hazard Recognition
 - i. Demonstrate the ability to describe the types of hazards that may be faced during entry.
 - ii. Recognize the signs and symptoms of exposure to hazards.
 - iii. List the consequences of exposure to hazards.
 - c. Communication
 - i. Define the required communication between the attendant and entrants.
 - ii. Describe the required communication for evacuation and rescue plans.
 - d. Atmospheric Metering Equipment
 - i. Demonstrate the proper use of atmospheric monitoring equipment.

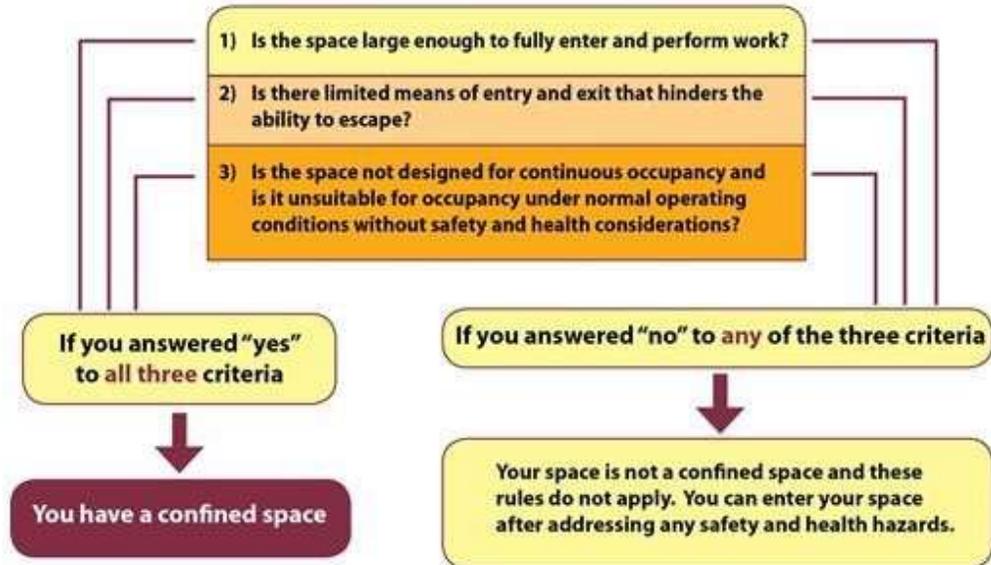
- ii. Describe the hazards the equipment should monitor for: toxics (CO and H₂S), explosive/flammable (LEL), and oxygen (O₂).
 - iii. Ensure calibration and maintenance of the equipment is current.
 - e. Protective Equipment
 - ii. Identify the personal protective equipment (PPE) needed for the hazards present.
 - Demonstrate the proper use of PPE in confined space work.
 - g. Rescue Equipment and Procedures
 - i. Recognize when to order evacuation (self-evacuate).
 - ii. Outline self-evacuation procedures.
 - iii. Describe how to initiate the emergency rescue plan.
 - h. Responsibilities of Individual Roles
 - i. Describe roles and responsibilities of all involved employees
 - ii. Describe how to handle unauthorized personnel.
 - i. Evaluation of Program Effectiveness

An evaluation of the effectiveness of the CSE program is essential to ensure that everyone is provided with 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.

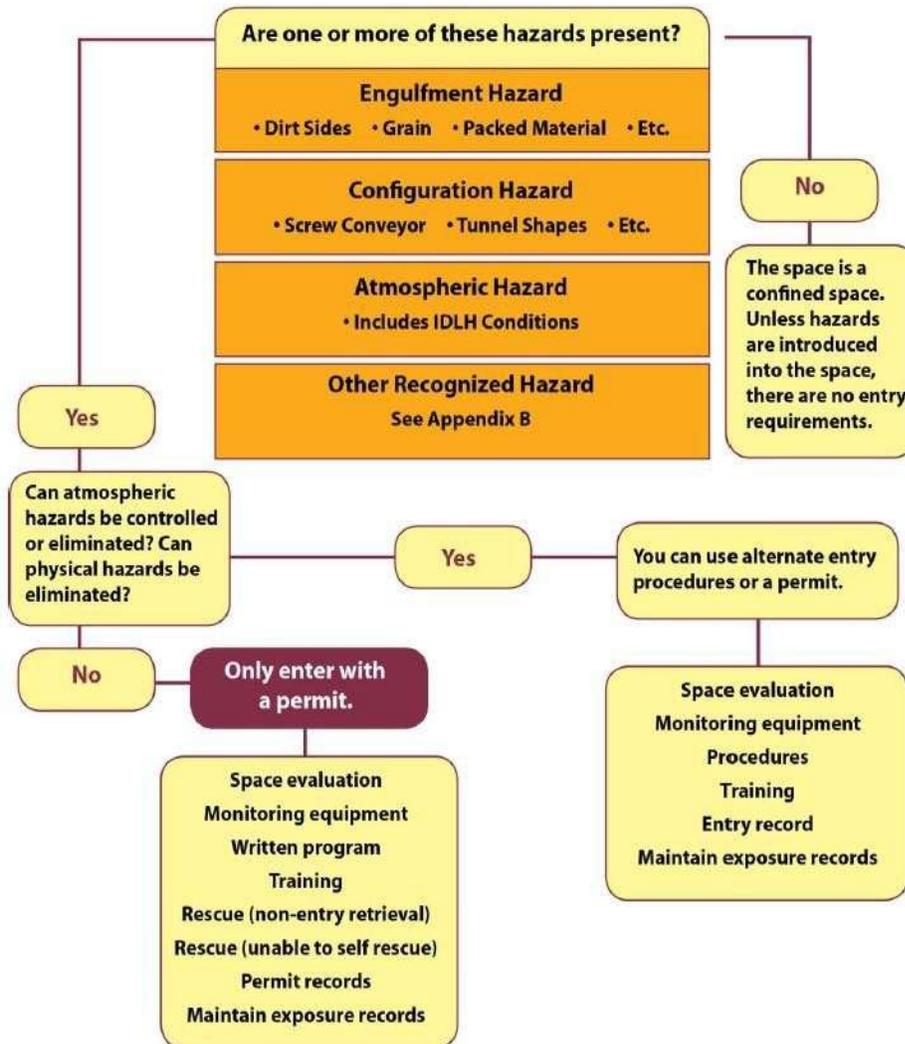
- i. A review of cancelled confined space permits will be conducted annually, at a minimum, by the safety director and/or safety committee to ensure that:
 - CSE permits were properly authorized and used.
 - Adequate personal protective equipment was used.
 - Atmospheric monitoring equipment was properly calibrated and used.
 - The confined workspace was properly monitored by standby personnel.
 - Proper communication channels were established to facilitate an emergency rescue.
 - ii. 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.

Appendix A

Evaluate the Space



Appendix B



CHAPTER 4.6

HAND TOOLS, POWER TOOLS AND JACKS

GENERAL

- A. At the beginning of each work period, make visual inspection of tools. Hand tools, power tools and jacks should be maintained in safe operating conditions and used only for the purpose for which they were designed. Damaged and defective tools shall be repaired by an authorized repair shop or removed from service. Any striking tool that has a crack or mushroomed striking surface is considered defective and must not be used.
- B. Tools shall not be left on scaffolds or elevated workspaces, and containers shall be provided for hand tools on the job site.
- C. Tools designed to accommodate guards shall be operated with such guards in place. Belts, gears, shafts, pulleys, sprockets, spindles, drums and other types of moving drives shall be isolated or guarded.
- D. Electric-powered tools shall be double-insulated type or effectively grounded.
- E. Hand and power tools shall be provided with and use respective types of personal protective equipment as required.
- F. Only non-sparking tools shall be used in locations where sources of ignition may cause an explosion or fire. Gasoline-powered tools shall not be used underground or in locations where toxic exhaust gases can accumulate unless this area is properly monitored and ventilated. Impact tools, including drift pins, wedges and chisels shall be kept in a dressed condition or equipped with non-mushrooming heads.

PNEUMATIC TOOLS

- A. Pneumatic impact tools shall be operated with safety clips or retainers installed to prevent tools being accidentally discharged from the chuck.
- B. The manufacturer's safe operating pressure for hoses, pipes, valves and fittings shall not be exceeded. Defective hoses, valves and fittings shall be removed from service.
- C. Compressed air shall not be used for cleaning purposes unless pressure is 30 PSI or below and the operator is protected by personal protective equipment. The 30-PSI requirement does not apply to sand blasting, green cutting, removal of mill scale, cleaning concrete forms and similar cleaning operations.
- D. Air hoses shall not be used for hoisting or lowering tools. Hoses shall not be laid on ladders, steps, scaffolds or walkways in a manner creating a tripping hazard.
- E. When using pneumatic tools or equipment, place the control switch or valve in the "OFF" position before connecting or disconnecting; then bleed off excess pressure.

GRINDING TOOLS

- A. Grinding tools shall not be used without the safety guards, protective flanges and tool rests installed and maintained in proper adjustment.
- B. Abrasive wheels and scratch brush wheels shall not be operated in excess of their safe speed. Cracked or defective abrasive wheels shall be removed from service immediately.

WOODWORKING TOOLS

- A. Switches shall be located to enable the operator to cut off the power without leaving his operating position. Fixed power-driven tools shall be provided with a disconnect switch that can be locked in the “OFF” position.
- B. A push stick, block, or similar safe means shall be used for all positions close to high-speed cutting edges.
- C. Planner and joiner shall be equipped with cylindrical cutting heads and fully guarded.
- D. Band saw blades shall be fully enclosed except at the point of operation.
- E. Work areas shall be kept clean and a brush provided at each machine to remove sawdust, chips and shavings.

POWER SAWS

- A. Bench-type circular saws shall be equipped with spreaders, anti-kickback devices and guards that automatically enclose the exposed cutting edges.
- B. Radial arm saws and swing cut-off saws shall be equipped with limit stops which prevent the leading edge of the blade from traveling beyond the edge of the table. These saws shall also be equipped with automatic brakes or automatic return devices.
- C. Power saws shall not be left running unattended.

POWDER-ACTUATED TOOLS

- A. Powder-actuated tools shall be operated and serviced only by people who have been trained and certified in the safe use of such tools. Operators must possess an operator card issued by a firm or person authorized to issue such cards.
- B. Safeguards shall be taken to prevent the possession or use of these tools and their discharge by unauthorized people.
- C. High velocity tools are prohibited. Only low velocity piston drive tools are permitted.
- D. Only powder charges, studs or fasteners specified by the manufacturer for the specified tools shall be used.

HAND-POWERED WINCHES AND HOISTS

- A. Hand-powered winches and hoists shall be used within the manufacturers rated capacity and the capacity shall be legibly marked on the winch or hoist.

LEVER AND RATCHET, SCREW AND HYDRAULIC JACKS

- A. The manufacturer’s rated capacity shall be legibly marked on all jacks and shall not be exceeded.
- B. Jacks of all types shall have a positive stop to prevent over-travel.
- C. Jacks shall be set on a stable and firm footing and dripped or blocked necessary to prevent settlement or dislodgment. Where there is a possibility of slippage, a wood block shall be placed between the jack and the load.

CHAPTER 4.7

TEMPORARY ELECTRICAL INSTALLATIONS

- A. Electrical installations, temporary or permanent, shall comply with the applicable provisions of the National Electrical Safety Code, National Electrical Code and applicable State Codes.
- B. Electrical wire, conduit, apparatus and equipment shall be approved or listed by the Underwriters Laboratories, Inc. or Factory Mutual Laboratories for specific applications.
- C. Coffman Excavation shall not permit an employee to work in such proximity to an electrical circuit that he may contact it in the course of his work, unless the employee is protected against electrical shock by de-energizing the circuit and grounding it or by guarding it by effective insulation or other means.
- D. Work on electrical circuits and equipment shall be performed only by personnel familiar with the code requirements and qualified to perform the type of work to which they are assigned.
- E. No electrical work shall be done energized when it can be done non-energized. When it is necessary to work with hot lines, only qualified personnel, properly equipped with rubber gloves and blankets which have been tested regularly in accordance with the American National Standards Institute, shall do so. Foremen shall see that adequate tools are provided.
- F. Temporary lighting strings shall consist of non-conductive lamp sockets and connections permanently molded to the connector insulation. Bulbs attached to festoon lighting strings and extension cords shall be protected by lamp guards, unless deeply recessed in a reflector. Broken or defective bulbs shall be promptly replaced.
- G. Extension cords shall be 3-wire grounded type listed by the Underwriters Laboratories, Inc.; the rated load shall not be exceeded.
- H. Switches, fuses, and automatic circuit breakers shall be plainly marked, labeled, or arranged to permit identification of circuits or equipment controlled by them.
- I. Switches shall be of the enclosed safety type with the enclosures grounded and installed so as to minimize the possibility of accidental operation.
- J. Switches and breakers rated 440 volts or greater shall be provided with a means of locking in the "OFF" position. Also, fuse cabinets and circuit breaker cabinets shall be equipped with lock-type doors.
- K. All 115- and 120-volt, single phase, 15 and 20 ampere receptacle outlets used for construction operations, shall be protected by a ground-fault circuit interrupter program or equipment grounding equipment program to protect employees.
- L. If a ground-fault circuit interrupter system is used, it shall be installed in strict compliance with the manufacturer's specifications and shall be tested prior to use.
- M. If an equipment grounding conductor program is elected, the following provisions shall be adhered to:
 - 1. The program shall apply to all cord sets, receptacles and equipment connected by cord and plug, which are available for use by employees.
 - 2. A written description of the program, including type of electrical equipment and wiring and Safety precautions, shall be submitted to the Project Engineer.
 - 3. The Subcontractor shall designate one or more qualified people familiar with code requirements to supervise the installation of the program.
 - 4. Each cord set, attach cap, plug and receptacle or cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external damage. Equipment found to be defective or damaged shall be removed from service and not used until repaired.

5. The following test shall be made on all cord sets, receptacles which are used for construction operations, and cord and plug-connected equipment required to be grounded:
 - a. All equipment grounding, conductors and receptacle outlets shall be tested for continuity and shall be electrically continuous.
 - b. Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor and to ensure that the grounding conductor is connected to the proper terminal.
6. The tests specified in subparagraph e. shall be performed before first use, before equipment is returned to service following repairs, before equipment is used following an accident which could have damaged the grounding system, and at intervals not to exceed three months, except that the interval may be six months for cord sets and receptacles which are fixed and not exposed to damage.
7. A color-coding system or other system shall be implemented. Coffman Excavation and the subcontractor shall maintain a written record of tests and inspections and such a record shall indicate the last date it was tested or the interval for which it was tested. This record shall be kept by means of log, color-coding or other effective means.
 - a. Color Coding System
 - White - January 1 to March 31
 - Green - April 1 to June 30
 - Red - July 1 to September 30
 - Orange - October 1 to December 31
 - Brown - Needs repair
 - b. See "Attachment A" for "Electrical Test/Inspection Log"

CHAPTER 4.8 HANDLING AND STORAGE OF MATERIALS

The overall purpose of this portion of the Project Safety Program is to provide for the safe and orderly receipt, storage and dispensing of materials and products necessary to each Subcontractor operation.

Recognizing that proper storage and material handling procedures and methods will provide for conservation of materials and equipment, and increase productivity by providing a smooth flow of materials to the project areas as needed, the following is necessary:

- A. Each storage structure or area shall be provided with properly installed and maintained fire extinguisherequipment.
- B. One responsible supervisor shall be designated and held responsible for maintenance of the designated area provided to each Subcontractor. These responsibilities will include the following:
 1. Proper storage methods and designated areas for flammable and combustible liquids.
 2. Proper stacking of materials with regard to size, type and length, in piles, shelves, racks or bins necessary.
 3. Maintenance of good housekeeping procedures throughout the facilities or areas at all times.
 4. The proper disposal of waste and scrap materials.
 5. The segregation of non-compactable materials.
 6. The material handling methods and procedures, which will provide safe and orderly storage in accordance with, recognized practices.

7. The posting of warning signs, tags or bulletins may be required.
 8. Provisions of the necessary grounding and bonding are required for specific materials.
 9. Proper receiving and dispensing of incoming and outgoing materials which will include choking and blocking of trucks or other vehicles during loading and unloading operations.
 10. Provisions for proper personal protective equipment that may be necessary for given products.
 11. Assuring that only properly trained personnel are used in the handling of hazardous materials and to ensure that proper handling methods are used.
 12. The prompt reporting of any unsafe condition or practice, which may not be corrected within the scope of his authority.
- C. Loose materials on open decks or other exposed locations shall be removed or secured at the end of each day to eliminate dislodgment by wind or other causes.
- D. All personnel engaged in handling materials of any type shall have been instructed by their supervisor in the proper method of lifting heavy objects.
1. Proper lifting procedures:
 - a. Consider the size, weight and shape of the object to be carried. Do not lift more than can be handled comfortably. **If necessary, get help.**
 - b. Set feet solidly; one foot can be slightly ahead of the other for increased effectiveness. Feet should be far enough apart to give good balance and stability (approximately the width of the shoulders).
 - c. Get as close to the load as practical. Bend legs about 90 degrees at the knees. Crouch; do not squat. It takes about twice as much effort to get up from a squat.
 - d. Keep the back as straight as practical. It may be far from vertical, but it should not be arched. Bend at the hips, not from the middle of the back.
 - e. Grip the object firmly. Maintain that grip while lifting and carrying. Before changing or adjusting this grip, set the object down again.
 - f. Straighten the legs to lift the object, and at the same time bring them back to a vertical position. A good tip is to look up at the sky or ceiling when beginning to lift
 - g. Never carry a load that you cannot see over or around. Make sure the path of travel is clear. Carry the object close to the body.
 - h. Never turn at the waist to change direction or put an object down. Turn the whole body and crouch down to lower the object. Grip the object firmly, keep it close, and keep the back straight (not arched). To keep hands from being pinched against the floor or ground, put one corner of the object down first, so that the fingers can be moved from under the sides.
 - i. When lifting an object with another person, employees must ensure that they both lift at the same time and get the load down together. One person should give the signals or orders.

CHAPTER 4.9
HAZARD COMMUNICATION POLICY
GLOBAL HARMONIZATION STANDARD

INTRODUCTION

Coffman Excavation has developed a hazard communication program fully compliant with the Global Harmonization Standard (GHS) to enhance our employees' health and safety. We intend to provide information about chemical hazards and the control of hazards via our comprehensive hazard communication program, which includes container labeling, Safety Data Sheets (SDS) and employee training.

Project management will ensure that all hazardous chemicals intended for use at each of our job sites are identified. This involves a review of the container labels and Safety Data Sheets to determine which products are hazardous and need to be included on our program.

**The following program outlines how we will accomplish this plan:

A. CONTAINER LABELING:

1. It is the policy of this company that no container of hazardous chemicals will be released for use until the following label information is verified:
 - a. Containers are clearly labeled with a harmonized signal word, pictogram and hazard statement for each hazard class and category. Precautionary statements must also be provided.
 - b. The name and address of the manufacturers are listed.
2. To ensure that employees are aware of the chemical hazards of materials used in their work areas, all secondary containers will also be labeled with an extra copy of the original manufacturer's label.
3. This responsibility has been assigned to warehouse foremen, project superintendents, project managers and the company safety coordinator. The responsibility will be assigned as follows:
 - a. Equipment Manager- No chemicals or hazardous materials will leave Coffman Excavation shop without proper labels.
 - b. Project Superintendents- Shall check all chemicals or hazardous materials on the job site and be sure they are properly marked, have the appropriate SDS sheets and an inventory list of all chemicals posted at job site.
 - c. Project Managers- Shall request SDS sheets on all chemicals or hazardous materials ordered for the job.

B. SAFETY DATA SHEETS (SDS)

1. Safety Data Sheets (SDS) are informational bulletins supplied by chemical manufacturers or distributors. Copies of SDS's for all hazardous chemicals to which employees may be exposed to, are kept in all job offices or superintendent's company vehicles.
2. The SDS's will be available at the job site for the employee's use and review. All SDS's are available on the Coffman QR code.

3. SDS's are available to all employees for review. If SDS's are not available or new chemicals in use do not have SDS's, please immediately contact the company Safety Coordinator.

C.EMPLOYEE TRAINING AND INFORMATION

Employees are to attend a health and safety orientation for the initial Hazard Communication Training. Newemployees are to be oriented prior to starting work.

The training will be on the following:

- a. An overview of the Hazard Communication requirements.
- b. Location and availability of our written hazard program and Safety Data Sheets.
- c. Physical and health effects of hazardous chemicals.
- d. Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
- e. How to lessen or prevent exposure to these hazardous chemicals through personal protective equipment and usage of controlling work practices.
- f. Steps the company has taken to lessen or prevent exposure to these chemicals.
- g. Emergency procedures need to be followed if our employees are exposed to these chemicals.
- h. How to read labels and review SDS's to obtain appropriate hazard information.

NOTE: It is critically important that all of our employees understand the training. If you have any additional questions, please contact the Safety Coordinator.

- i. When new chemicals are introduced, the job superintendent will review the employee training and information section to ensure that all new items are presented during the job site safety meeting.

D. HAZARDOUS NON-ROUTINE TASKS

1. Periodically, employees are required to handle chemicals for hazardous non-routine tasks. Prior to starting work on such projects, each affected employee will be given information by their supervisor about hazards to which they may be exposed during such an activity.
2. This information will include:
 - a. Specific chemical hazards
 - b. Safety measures which must be utilized.
 - c. Measures the company has taken to lessen the hazards, including ventilation, respirators, presence of another employee and emergency procedures.

E. INFORMING OTHER CONTRACTORS

1. To ensure that other contractor's employees have access to the SDS's for the hazardous chemicals or products used at multi-employer job sites, it is the responsibility of the project manager/superintendent to provide the contractors with the following information:
 - a. The name and location of the hazardous chemicals to which they may be exposed while on the jobsite. Any recommendations or appropriate protective measures to be taken by the other contractor's employees.

NOTE: The specific method a construction employer uses to inform other contractors at the same jobsite is not prescribed by the rules. It is important that the prime and subcontractors arrange specific procedures to inform one another about their hazard communications programs. The methods should be designed to fit in with the type of jobsite operations being conducted.

Coffman Excavation requires that this policy be addressed at construction meetings, owner meetings and weekly job meetings or at any time the coordination of safety is needed between the different parties involved in the job.

F. PROGRAM EFFECTIVENESS

1. If anyone has questions about this plan, please contact the company Safety Coordinator.

**Our plan will be monitored by the Safety Coordinator to ensure that the policies are carried out and that the plan is effective. When necessary, the program will be modified to address any program deficiencies.

CHAPTER 4.10 HEAVY EARTH MOVING AND HANDLING EQUIPMENT

- A. Vehicles and mobile equipment shall be operated only by authorized individuals who are qualified to operate the equipment to which they are assigned.
- B. Vehicles and mobile equipment shall not be operated at speeds greater than are reasonable and safe considering other conditions, traffic, road conditions, type and condition of equipment, etc. The operator must have the equipment under control at all times and be able to stop it within a clear sight distance.
- C. No vehicle or equipment shall be stopped, parked or left standing on any road or in any location in such manner to endanger personnel or property. Vehicles and equipment shall not be left unattended unless the brakes are set securely and the wheels chocked where applicable.
- D. All equipment left unattended on or near a roadway shall have appropriately lighted barricades placed around the location of the equipment.
- E. Loaders, backhoes, bulldozers excavators and other similar equipment shall have their blades and buckets fully lowered and park brake set when left unattended.
- F. All vehicles and equipment shall be checked at the beginning of each shift and periodically throughout the day to ensure that the equipment is in proper operating condition and that accessories that affect safe operations are free from defects.
- G. Heavy equipment, machinery or parts thereof shall be blocked to prevent falling or shifting before employees are permitted to work under or between them.
- H. All equipment and vehicles with cabs shall have safety glass or equivalent windshields that are free from cracks and defects. Broken or cracked glass shall be reported and repaired.
- I. No person shall be allowed to ride in or on any equipment or vehicle except in seats, which are provided by the manufacturer.
- J. On all rubber-tired or crawler scrapers, bulldozers, front end loaders, backhoes, motor graders, industrial tractors and forklift tractors, Rollover Protection Structures (ROPS) and Falling Object Protective Structures (FOPS) are required.
- K. If equipment is provided with seat belts, seat belts shall be worn.
- L. All bi-directional earth moving, haulage or compacting equipment shall be equipped with automatically operated reverse signal alarms.

CHAPTER 4.11

CRANE OPERATIONS

Coffman Excavation has developed written guidelines for safe crane operation practices. Cranes, boom trucks and other related hoisting equipment shall be operated only by employees trained and certified on the equipment. Safety shall always be the operator's most important concern. The operator shall refuse to operate the equipment when she/he knows that an unsafe condition appears and consult a Supervisor when safety is in doubt.

1. Operator Qualifications

1. Supervisors shall review the qualifications of all crane operators and other mobile equipment operators. Operators shall:
 - a. Operators must be NCCCO certified or recognized equivalent.
 - b. Have a full understanding of the Operator's Manual assigned to the equipment
 1. being operated including boom attachments/use, load charts, reeving cable and
 2. blocks, inspection and maintenance, etc.
 - c. Be "checked out" in each piece of equipment by a designated company representative with a hands-on demonstration of proficiency.

2. Beginning Safe Crane Operation

1. All crane operators must follow the company rules for safe crane operation.
 - a. Read and understand the Operator's Manual for each crane operated.
 - b. Completely understand the load chart for each crane operated.
 - c. At the start of each shift or before starting and operating any crane, the operator shall walk around the crane using the Safety Inspection Checklist provided by the company to perform a complete safety inspection.
 - d. The operator shall be alert, physically fit, and free from the influences of alcohol, drugs, or medication that might affect his or her performance.
 - e. She/he shall see that people, equipment, and material are kept out of the work area.
 - f. The area around the crane shall be properly barricaded or flagged.
 - g. Check all brakes and clutches.
 - h. Always stay within the rated load capacity for whatever crane is being operated.
 - i. Be sure the crane is level before making any picks.
 - j. Inspect all slings, chokers, shackles, and miscellaneous rigging equipment before any picks are made with the crane.
 - k. Loads shall not be lifted if winds create a hazard, lower the boom if necessary. The load shall be lowered to the ground as directed.

3. Safe Operation of a Crane

1. All hoisting equipment shall be operated in compliance with the manufacturer's specifications and limitations. Attachments used with the hoisting equipment shall not exceed the capacity, rating, or scope recommended by the manufacturer.

The following precautions are to be observed in the set-up of all cranes.

- a. A proper swing clearance must be maintained.
 - b. All the outriggers must be extended according to the manufacturer's specifications.
 - c. Pads must be pinned to outrigger legs and placed on firm footing.
 - d. Counterweight configurations per manufacturer's specifications.
 - e. All tires must clear the ground.
 - f. The crane must be level.
 - g. Verify the weight of the load.
 - h. Know the operating radius.
 - i. We will not expose any worker to a hazardous atmospheric environment. Cranes will not be operated inside any building without Safety Director's approval and an monitoring plan in place.
2. The following conditions can affect the crane's capacity and are to be evaluated during the crane's set-up and lifting operations.
 - a. If the crane is not level.
 - b. Excessive wind conditions.
 - c. Swing out.
 - d. Improper outrigger positions.
 - e. Unstable ground conditions.
 - f. Eccentric reeving.
 3. Whenever the crane is positioned for making a pick in the "over the side" quadrant, refer to manufacturers' set-up procedures.
 4. Larger crane pads shall be used if there is a possibility of soil undermining or unstable ground conditions exist.
 5. When leaving a crane unattended, the operator shall take the following steps before leaving the seat.
 - a. Lower the load to the ground. Lower the boom if necessary.
 - b. Set the swing brake or lock.
 - c. Set all drum pawls.
 - d. Shut off the engine.
 - e. Remove the keys and lock doors, if necessary.
 6. When leaving the crane for long periods of time (overnight, over the weekend, days or weeks, etc.) the following precautions shall be taken:
 - a. Lay boom down and block, when conditions warrant or put boom in cradle.
 - b. Disconnect master clutch and leave controls in neutral.
 - c. Set parking brakes, pawls, and mechanical locks.
 - d. Lock doors and controls.
 - e. Protect rope and exposed machined surfaces. On hydraulic units, retract the boom to protect surface of rods on boom hoist.

4. Crane Safety Rules and Principles

1. The operator shall log any and all mechanical or electrical problems on the daily log book and notify the supervisor and mechanic of any serious problems at once.

2. The operator shall use a spotter and turn signals on the crane, if equipped, during pick and carry operations or crane movement at the job site.
 3. Sleeping in a crane, or cat napping, shall not be tolerated at any time or any circumstances.
 4. All cranes shall be fitted with boom angle indicators and other required devices and a load chart placed inside the crane cab where the crane operator easily sees it. The weight of all loads shall be known prior to any lift. The load chart shall be referred to at all times to determine capacities based on a radius. Operators allowing their cranes to tip or approach near tipping to determine capacity shall be subject to disciplinary action, up to and including termination. Tipping to determine capacity shall not be permitted.
 5. Loads shall not be dragged or pulled sideways. This places side stress on the boom and can overload the crane.
 6. The crane's boom and rigging shall be assembled in accordance with the manufacturer's instructions and closely supervised.
 7. Access roads and operating areas shall have adequate ground strength to support the crane. Where necessary, the ground shall be strengthened and properly compacted, and crane mats shall be used.
 8. Prior to traveling with the crane, the route shall be checked and proper clearance established, being aware of overhead power lines and underground pipelines and any other obstructions.
 9. Pick and carry shall only be allowed if and when it is allowed by the crane load chart and only if the load and shift configuration falls within parameters of the load chart. A spotter is required.
 10. The following conditions are observed during on-rubber pick and carry:
 - a. Capacity is based on machine being level and on firm ground.
 - b. Capacities not to exceed manufacturer's specifications.
 - c. Axle locks must be functioning properly.
 - d. Proper tire size, inflation, and conditioning must be maintained.
 - e. The load must be secured (tag lines, or tie load to the frame)
 - f. A spotter must be used.
 11. Swinging any load shall be performed slowly. Swinging too fast can increase the load radius, causing overloading and the risk of striking adjacent objects.
 12. A minimum clear space of 36 inches shall be maintained between the crane body, the counterweight, and any other moving parts of the crane and fixed objects nearby to prevent persons from being trapped and crushed when the weight swings. The swing radius shall be physically barricaded.
 13. Operators shall be required to maintain good housekeeping inside the cab of all cranes.
 14. It shall be clearly understood by all operators that a violation of any of the above listed guidelines or policies could result in a discipline up to, and including, termination.
5. **Exceptions**
1. Deviation from the above procedures may be allowed only with the permission of the Project Superintendent, Safety Supervisor, or designated rigging coordinator; or to check swing and counterweight clearances.
6. **General Crane Safety**

1. Rated load capacities, recommended operating speeds, and special warnings or other instructions shall be posted on all the equipment and shall be visible to the operator while in the cab.
2. The operator shall avoid carrying loads over people.
3. Belts, pulleys, gears, shafts, sprockets, spindles, drums, flywheels, chains, or other moving parts shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
4. All windows in cabs shall be of safety glass, or equivalent, that introduces no visible distortion that will interfere with the safe operation of the crane.
5. Guardrails, handholds, and steps shall be provided for easy access to car and cab.
6. Platforms and walkways shall have anti-skid surfaces.
7. An accessible fire extinguisher of 5 BC or greater shall be in all operator cabs.
8. All rubber-tired cranes shall be equipped with outriggers and sufficient blocking to properly stabilize the crane while operating.
9. Rubber-tired mobile cranes shall be equipped with rearview mirrors.
10. Positive boom stops shall be provided on lattice cranes.
11. Oiling and greasing shall be done under safe conditions with the machine at rest, except where motion of the machine is necessary.
12. All steps, boom ladders, and running boards shall be of substantial construction and in good repair at all times.
13. Cranes setting on a steep grade shall be securely blocked.
14. Hand signals to crane operators shall be prescribed by the applicable ANSI standard for the type of crane used. A copy will be posted on the crane.
15. Coffman Excavation policy reminder: tree removal contractors are not allowed to tie their safety lines to the ball or any part of the crane. Under no circumstances are they allowed to ride the ball.

7. **Multiple Crane Lifts**

1. Lifts involving two or more cranes are complex operations requiring considerable skill and planning. A multiple crane lift must be meticulously planned and every eventuality taken into consideration. The lift procedure includes the following minimum requirements.
2. The lift is to be planned and implemented by a qualified person. Use engineering expertise for planning if needed.
3. On multiple crane lifts, extreme caution must be used when cranes are loaded and unloaded simultaneously to avoid overloading any single crane.
4. When planning multiple crane lifts, use a 75% factor of crane capacity as a guideline.
5. Ground conditions must be stable, compacted, and level. If there is any doubt, the situation will be corrected by blocking, mats, or fill material.
6. All cranes must be set up on solid cribbing
7. All cranes must be level.
8. The load weight must be determined.
9. The longest load radius for each crane must be determined.
10. Each crane's boom length, radius, and capacity must be reviewed for all aspects of the lift. Be sure to review the longest load radius for each crane.
11. All cranes must be in good operating condition.

12. It must be determined how much load will be carried by each crane and how much load will transfer from one crane to the other.
13. All crane and load movement should be made as smoothly as possible.
14. The hoist line, swing, and boom speeds must be closely monitored.
15. Hoist lines must be kept vertical at all times during lift operations to avoid any dangerous side loading of booms.
16. Swing and boom movement must be kept to a minimum.
17. A pre-lift meeting, with the qualified person, operators, qualified signal person(s), and qualified rigger(s) is to be held the day of the lift. The meeting should include job duties for all personnel.
18. A dry run is recommended prior to the actual lift without the load being attached unless it is impossible to do so.
19. All communications will be made by radio, on a dedicated channel and all communications will be tested prior to the lift.
20. It is imperative that only the one designated person direct and control the lifting operations (lift director).

8. Crane Inspections

1. Daily Inspections
2. Cranes shall be inspected each day before using the crane to make any lifts and the crane's logbook completed by the crane's operator. Daily inspections shall include but not be limited to the following:
 - a. Lubrication, fuel, oil, water or coolant, hydraulic oil reservoirs, etc.
 - b. Inspect and test all brakes and clutches for proper operation.
 - c. Load brakes.
 - d. Visually inspect all components of the machine used in lifting, swinging, or lowering the load or boom, for any defects which might result in unsafe operation of the crane.
 - e. Inspect all wire ropes, sheaves, drums, rigging hardware, and attachments.
 - f. Check for freedom of rotation of all swivels.
 - g. Check all functional operational mechanisms, such as sheaves, drums, brakes, locking mechanisms, hooks, boom, jib, hook, roller brakes, outrigger components, limit switches, and safety devices.
 - h. Visually inspect the boom and the jib for any evidence of physical damage or cracks.

9. Monthly or Periodic Inspection

1. Detailed inspection of the crane shall be conducted periodically, at least monthly, and shall include all of the item's list above, as well as the items listed below.
2. Equipment which has been idle for one month or more, but less than six months, shall also be inspected for items listed below.
3. Monthly or periodic inspections shall include, but not limited to:
 - a. Entire crane for structure damage or evidence of fatigue.
 - b. All welded connections for cracks.
 - c. Cracked or worn sheaves.
 - d. Excessive wear on brakes and clutch systems.
 - e. Indicator systems.

- f. Power plants for proper operation.
- g. Steering, braking, and locking devices.
- h. Hydraulic and pneumatic hoses and fittings and tubing.

10. Annual Inspections

- 1. All cranes shall receive an annual inspection and certification by an approved and licensed agency, with certification placed on file in the Safety Department, and lifting devices and rigging shall be inspected by a qualified person.

11. Maintenance

- 1. Maintenance of the cranes and boom trucks shall be performed in accordance with all manufacturer's recommendations.

12. Lift Plans

- 1. As required, a lifting plan(s) shall be developed, implemented, and reviewed by all the employees associated with the lift prior to mobilization of the equipment, rigging, equipment set-up or actual lift if needed.

13. Ensuring a Safe Lift

- 1. To ensure a safe lift, at a minimum the following items shall be checked:
 - a. The Site.
 - b. Check the route to be traveled by the lifting equipment. Notify the proper departments if required (Fire, Police, Transit, etc.).
 - c. Will traffic control be required to secure the area of the lift.
 - d. Check for overhead obstructions that may exist between the crane and landing point of the load (powerlines, trees, buildings, etc.).
 - e. Check the site for underground hazards that may exist between the crane and landing point of the load (power lines, vaults, waterlines, etc.).
 - f. When lifting onto an occupied building make arrangements to clear people over the lift zone and landing zone.
 - g. The site must be controlled by barriers, barrier tape, or other warning devices.
 - h. Visibility is critical both to the operator and the rigger(s). A clear method of communication should be established.
 - i. Material to be lifted.

*The material or the object to be lifted shall be properly rigged.

*In the event the object to be lifted is on a platform or pallet, the object shall be secured to the lifting platform or pallet in a fashion that does not permit movement.

j. The Equipment Doing the Lift

- 1. To use.
- 2. All safety devices on the equipment shall be in a safe and good functioning condition.
- 3. The lifting and rigging devices shall be in good condition and be inspected prior to the lift, during the lift, and following the lift.
- 4. The Personnel Doing the Lift

*Equipment operators involved in making the lift shall be competent operators for the type of equipment they are to operate.

*Rigger(s) shall be trained and have a good safe working knowledge of the lift that is to be made.

*Rigger(s) shall be trained in the proper signals for the operator and

in the use of the equipment, such as radios, to ensure good communication.

*The crane or equipment operator may also be required to use a radio in the event of dual communication.

5. Additional Information-There shall be a pre-lift planning meeting to ensure the safety of the lift. This meeting shall include all parties involved in the lift. There shall be input from all persons involved in the lift. This meeting shall be documented.

CHAPTER 4.12 ROPES, SLINGS, CHAINS AND ACCESSORIES

- A. The use of ropes, slings, chains shall be in accordance with the safe usage recommendations of the manufacturer and the recommendations of the equipment manufacturer when used in conjunction therewith.
- B. The safe working load of ropes, slings, chains, accessories and rigging equipment shall be determined prior to use. The safe working load shall be observed and shall not be exceeded. For items of rigging used in combination, the safe working load shall be that of the weakest item.
- C. Use of job fabrication rigging hardware is prohibited unless designed and certified by a licensed engineer, qualified in this field and tested at 125% of the rated safe workload.
- D. The installation, maintenance and repair of ropes, chains, slings and rigging accessories shall be repaired only by the manufacturer or in accordance with the manufacturer's instructions and tested at 125% of the rated load prior to use.
- E. Rigging used for material handling shall be inspected prior to use on each shift to insure that it is in good repair and safe to use. Defective equipment shall be immediately removed from service.
- F. Chains shall not be subjected to impact loading or jerking.
- G. Hooks, rings, links or other attachments when used with alloy steel chains shall have rated capacity at least equal to that of the chain. Job-made hooks, links or makeshift fasteners formed from bolts, rods, etc. shall not be used.
- H. When U-bolts are used for eye splices on wire ropes, the U-bolt shall be applied so that the "U" section is in contact with the dead end of the rope.
- I. Protruding ends of strands and splices on slings and bridles shall be covered or blunted.
- J. Except for end fasteners, wire rope used in hoisting, lowering or pulling loads shall consist of one continuous run without knots or splices.
- K. The eyes of rope slings should be properly spliced and should have thimbles in them to withstand wear.
- L. Wire rope with one or more of the following defects shall be removed from hoisting or load carrying service immediately.
 - a. Corrosion--which results in pitting or loss of more than 1/3 of the original wire diameter.
- M. Broken wire--one or more valley breaks, six randomly broken wires in one wire rope only or three broken wires in one strand in any one lay.
- N. Abrasion--scrubbing, flattening or peeling resulting in a loss of more than 1/3 of the original diameter of the outside wires.
- O. Kinking--which results in distortion of the rope structure.
- P. Heat damage.
- Q. Reduction in diameter
- R. Slings shall be protected from sharp, rough or square corners by appropriate means in order to prevent damage to the strands, wires or links.
- S. Loads lifted with multiple slings shall be arranged so as to equalize the weight of the load as much as possible.

CHAPTER 4.13 WELDING AND CUTTING

- A. A competent person shall instruct employees in the safe and proper use of cutting and welding equipment prior to use of that equipment.
- B. Eye protection is required for both welders and helpers.
- C. Hard hat-welding combinations or other protection, which protects the head and eyes, shall be used.
- D. Respirators and/or local ventilation must be used where required and on metals that are galvanized, cadmium coated, chrome bearing, lead-based or mercury bearing.
- E. Airline respirators shall be used when welding or cutting in confined spaces on metals of recognized toxicity.
- F. A minimum of one (1) 10 lb. all purpose (A-B-C) dry chemical fire extinguisher shall be kept within 10 feet of any cutting or welding operation. The extinguisher shall be kept in a conspicuous place, free of any obstructions.
- G. Screens, shields or other safeguards shall be provided for the protection of workers or combustible materials below or otherwise exposed to sparks, arc rays or falling objects.
- H. Areas containing combustibles and located within 30 feet of any welding/cutting operation shall be inspected 1/2 hour after work is completed and 1/2 hour after work is done for the day.
- I. All welding leads, cables and hoses must be safely positioned and secured to prevent tripping hazards and/or damage to the cables, leads or hoses. Hoses must be kept clean of passageways, ladders and stairs.

ARC WELDING

- J. Only manual electrode holders specifically designated for arc welding and cutting and of sufficient current rating shall be used.
- K. Any current carrying parts held in hands of the welder or cutter must be fully insulated and maintained in good repair.
- L. Welding leads (whips) must be free of repairs for a distance of 10 feet minimum from the electrode holder.
- M. Welding cables in need of repair shall not be used.
- N. The frames of welding and cutting machines shall be grounded.
- O. Ground returns must be of safe current carrying capacity, and be bonded where necessary, and be inspected periodically for soundness.
- P. Piping containing gases or flammable liquids shall not be used for ground returns.
- Q. Conduits containing electrical circuits shall not be used as ground returns.
- R. Electrodes must be removed from the electrode holders when holders are left unattended.
- S. Electrode holders must be safely placed or protected so they cannot make electrical contact with objects or employees.
- T. Hot electrode holders shall be dipped in water.
- U. When arc welding or cutting operations are to be stopped for any appreciable length of time, or when a machine is to be moved, the power supply switch to the machine shall be opened.
- V. Defective equipment must be tagged "out of service" until properly repaired or replaced.
- W. Any faulty or defective equipment shall be reported to the supervisor.

COMPRESSED GAS WELDING

- A. Both full and empty cylinders must be segregated in storage.
- B. Distance between oxygen and flammable gas storage must be at least 20 feet, or a 5-foot-high wall with at least 1/2-hour fire resistance rating must be installed between the cylinder storage areas.

- C. Storage areas for cylinders shall be kept at least 35 feet from any building.
- D. Smoking shall not be permitted within 20 feet of the storage area. Signs must be posted.
- E. A roof or cover to protect the cylinders should be constructed where practical.
- F. Cylinders must be secured in an upright position at all times. Cylinders shall be stored with caps in place.
- G. When transported by truck, cylinders must be secured in a vertical position and caps must be on all cylinders, which are equipped to receive them.
- H. When hoisting by crane or other device, a rack designed for hoisting purposes must be used. Chokers must not be used.
- I. Cylinder valves must be closed at any time cylinders are moved.
- J. Oxygen and fuel gas pressure regulators, including their related gauges, shall be in proper working order while in use. Each regulator shall be provided with an anti-flashback device for protection against excessive oxygen backpressure in the fuel gas supply.
- K. All oxygen cylinders and fittings shall be kept free of grease and oil.
- L. Oxygen and fuel gas regulators and hoses shall be maintained and in proper working order while in use.
- M. Torches shall be lit by friction lighters or other approved devices and not by matches or from hot work.
- N. An arc shall not be struck on a gas cylinder.
- O. Cylinders that leak or have leaky valves or are otherwise defective shall be immediately removed from service.
- P. Oxygen shall not be used to blow off clothing for ventilation, for comfort purposes or for cleaning work areas.
- Q. Before each shift, all valves, torches, regulators and gauges and hoses and couplings shall be inspected.

CHAPTER 4.14 EXCAVATION AND TRENCHING OPERATIONS

- A. Prior to the start of any excavation work, the site shall be carefully inspected by a certified competent person. for conditions, particularly solid conditions which require precautionary measures.
- B. The location of underground utilities should be predetermined. If any utility is to be removed or have service interrupted; arrangements shall be made with the utility owner beforehand.
- C. If utilities are left in place, protection against damage shall be provided. Exposed piping, cables, etc. shall be supported by shoring or suspension.
- D. Every precaution shall be taken to prevent falls of people, materials, equipment and tools into the excavation. Open cuts in or adjacent to thoroughfares shall be adequately barricaded and posted. Lighting shall be provided during hours of darkness. Pedestrian traffic shall be protected by guardrails or fences. Sidewalks shall not be undermined if used by the public during construction, unless properly shored.
- E. Temporary walkways extending past the curb lines shall be substantial and provided with protection at both ends and overhead, if needed. Pedestrian traffic shall not be routed into the street without protection. Walkways and passageways shall be lit if used during hours of darkness.
- F. Plank walkways shall be built with lumber, which is free of nails, large knotholes and splinters. Planking shall be parallel to the movement of traffic and shall be securely fastened down. Butt joining shall be used to avoid a tripping hazard. Exposed ends shall be beveled.
- G. Pipes, hoses, power lines, etc. crossing sidewalks and walkways shall be covered by troughs with beveled-edge boards.

- H. Trucks or other equipment routed across walkways or into public thoroughfares shall be directed into traffic by a posted signalman. Trucks and pedestrians shall not be on the walkway at the same time.
- I. Structures adjacent to excavations shall be braced to prevent settlement and lateral movement. Consideration of moving traffic loads shall be taken into account when excavations are located adjacent to sidewalks, streets or other pavements.
- J. Unsupported excavations shall be sloped at an angle equal to or smaller than the natural angle of repose. The angle of repose varies with different types of soil and must be determined on each individual project.
- K. In those instances where excavations cannot be sloped to the recommended angle, shoring shall be used to support the excavation walls.
- L. The support system shall be designated by qualified persons, meet accepted engineering requirements and inspected by a certified competent person.
- M. A certified competent person shall be held responsible for frequent inspection of the shoring system, and each workman shall be instructed to report at once any indication of weakness.
- N. Shoring and walls shall be protected against damage from swing loads being hoisted. Care shall be taken to see that sole pieces of shoring are on solid ground. On diagonal bracing, it is important that adequate bearing is provided at the lower end to resist the thrust of the bank above.
- O. Special precautions shall be taken to guard against damage from vibration of machinery or traffic.
- P. Jacks shall be inspected and known to be of sufficient strength for the load they are to carry before being placed into position.
- Q. Workmen shall not be allowed to work under an object supported by jacks alone. Blocking shall be carried forward with facing in order to minimize hazards due to failure by slipping of jacks.
- R. Ground water, when encountered, shall be controlled to minimize any disturbance of moisture content, which may cause sub grade movements.
- S. Excavated materials shall be set at least one-half the depth of the cut from the excavation wall so as to minimize soil failure. With no spoil within 2 feet of edge of trench.
- T. A soil support system shall be placed in every trench over five feet in depth, regardless of soil type, unless banks are sloped to the angle of repose.
- U. If a trench box is used the box shall extend above the surface of the ground (at an average of 18") to protect personnel in the trench from drop hazards.
- V. In installing the shoring, care shall be taken to place the crossbeams or trench jacks into horizontal position and space them vertically at appropriate intervals.
- W. Braces shall be secured to prevent sliding, falling or kick-outs.
- X. All materials used for shoring shall be in good condition, free of defects and of the proper size.
- Y. Properly designed and constructed trench shields or boxes may be used in lieu of shoring or sloping if such device provided equal or greater protection than required protection.
- Z. Care shall be used in locating excavating equipment. Mats or heavy planking shall be used on soft ground to distribute a load.
- AA. Workman shall stay clear of the swing of the bucket and/or the cab. The bucket shall not be swung over them at work.
- BB. When mobile equipment is allowed adjacent to an excavation, stop logs or barricades shall be installed. Ramps to provide access to the excavation cannot be sloped more than 15 degrees. Where ramps or runways are steeper than 15 degrees, a tower wrench shall be provided to prevent trucks from slipping backwards with potential damage to equipment and injury to personnel.
- CC. Runways for excavators, tractors, bulldozers, etc. are subject to hard usage and require frequent inspection and repair. Guardrails or curbs shall be placed along the edge of ramps. One-way traffic ramps shall be constructed with a minimum width of 12 feet. For two-way traffic, the minimum width shall be 22 feet.
- DD. Excavation 4 feet or more in depth shall be equipped with ladders or steps whereby no more than 25 feet of travel is necessary to reach each means of exit.

- EE. Ensure all travel alarms are functional.
- FF. Whenever an excavation is not at attended proper barricading of excavation will be installed. GG. Check rigging prior to material or trench shield into trench.
- HH. Employees will not put themselves under suspended loads.
- II. Formulated Data Sheets will be maintained with all shield systems.
- JJ. Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences or barricades when the excavations are not readily seen because of plant growth or other visual barriers(s).

CHAPTER 4.15 CONCRETE CONSTRUCTION

- A. All equipment, tools and materials used in concrete construction and masonry work shall meet the applicable requirements for design, construction inspection, testing, maintenance and operations as approved in OSEA.
- B. Employees working more than 6 feet above adjacent working surfaces, placing and tying reinforcing steel in walls, piers, columns, etc. shall be provided with and use a safety harness.
- C. Employees shall not be permitted to work above vertically protruding re-bars, which have not been covered or otherwise protected to eliminate the hazard of impalement.
- D. Reinforcing steel, when erected and during erection, must be guyed or supported to prevent collapse.
- E. Wire mesh rolls shall be secured at each end to prevent dangerous recoiling action.
- F. Rigging for handling and placement of reinforcing steel, forms and material, must be properly employed under the direction of competent and skilled supervision.
- G. Concrete buckets, when positioned by crane shall be suspended from shackles or approved type safety hooks.
- H. Riding concrete buckets for any purpose is prohibited.
- I. Bundles of reinforcing steel moved by crane shall be securely tied together to prevent slipping.
- J. Tag lines shall be used when moving panels or other large sections of forms by crane or hoist.
- K. Concrete trucks and similar mobile equipment shall be equipped with automatic backup alarms and competent signalmen shall control backing operations.
- L. Concrete trucks and similar mobile equipment shall be chocked (blocked) and the brake set when positioned on a slope.
- M. Concrete workers must be required to wear shirts and gloves to protect against concrete burns, dermatitis and skin irritations.
- N. Any form, regardless of size, shall be planned, designed and constructed with an adequate fact for safety.
- O. Stripped lumber and materials intended for reuse must immediately be cleaned of nails and wire and removed from the immediate work area.
- P. Pump-Crete or similar systems using discharge pipes shall be provided with pipe supports for 100% overload. Compressed air hose in such systems shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized. Safety chains shall be provided on all lines 2 inches in diameter or larger.
- Q. Vibrator crews shall be kept out from under concrete buckets suspended from cranes.

CHAPTER 4.16
OUT-OF-DOORS FUEL STORAGE AND DISPENSING

- A. Only approved containers and portable tanks will be used for storage and dispensing of flammable and combustible liquids.
- B. Approved safety cans, properly labeled, must be used for small quantities of flammable and combustible liquids.
- C. All tanks must be equipped with emergency venting devices.
- D. Storage areas used for the placement of fuel tanks must be graded to divert possible spills from buildings or other exposures or shall be curbed or diked (minimum 12 inches high) to contain possible spills.
- E. Tank storage areas must not be less than 20 feet from any building structure.
- F. Storage areas must be maintained free of weeds and combustible materials.
- G. Within 200 feet of any portable tank, a 12-foot fire equipment access way must be maintained.
- H. At least one portable fire extinguisher, not less than 20-B units shall be located and properly mounted not more than 75 feet or less than 25 feet from any outside storage area.
- I. At least one 20-B unit fire extinguisher shall be mounted on each vehicle used for transporting or dispensing flammable liquids.
- J. Dispensing areas shall be located at least 25 feet from any operation.
- K. Bonding wires and slips must be provided and used for transferring flammable or combustible liquids.
- L. Only approved dispensing nozzles shall be used for dispensing liquids.
- M. All dispensing units, including hoses, must be protected against collision damage.
- N. Each tank and container must be legibly labeled, identifying the content.
- O. Each dispensing area must be posted as follows:

DANGER - FLAMMABLE LIQUIDS NO SMOKING
- P. Each dispensing area must be posted as follows:

NO SMOKING
DANGER - FLAMMABLE LIQUIDS
ENGINE MUST BE SHUT DOWN WHILE REFUELING
- Q. Inventory records must be maintained of Class I flammable liquids (gasoline) storage amounts.
- R. No open flames or other sources of ignition must be permitted within 50 feet of dispensing or storage areas.
- S. Only properly trained and designated persons shall be allowed to handle or dispense flammable or combustible liquids.

CHAPTER 4.17
PUBLIC SAFETY AND TRAFFIC CONTROL

- A. All traffic signs or devices used for protection of construction workers, or the public shall conform to State of Oregon Manual on Uniform Traffic Control Devices for Streets and Highways.
- B. A traffic control plan, in detail appropriate to the complexity of the work project shall be prepared and submitted to the Project Engineer before the site is occupied. The Subcontractor shall notify Coffman Excavation Safety Officer or any changes in the traffic control plan.
- C. Barricades, cones and/or similar protective devices shall be used whenever workers or equipment are exposed to traffic or similar hazards. Devices to be left overnight shall be inspected at the end of the workday and a log maintained of such inspection.
- D. When traffic lanes are closed due to work activity advanced warning signals and eye level warning devices shall be used as described in the manual on uniform traffic control devices with permission

- from proper authorities.
- E. In carrying on the work, the Subcontractor shall interfere as little as possible with traffic. Subcontractors shall provide and maintain ingress and egress for all residences and places of business located along the construction route.
 - F. Materials stored on public or private roadways shall be placed so as to cause as little obstruction to the traveling public as possible. If this is not possible, barricades or similar protective devices shall be used to warn the public. Materials shall be secured so as not to permit displacement.
 - G. The following general rules shall apply to the use of all traffic signs:
 - 1. Before any new route or detour is open to traffic or before any work creating a hazardous condition is begun, all necessary signs shall be in place.
 - 2. Signs required by road conditions or restrictions shall be immediately removed when these conditions cease to exist. Guide signs directing traffic to temporary routes should be removed when no longer applicable.
 - 3. All signs having any application at night shall be reflected or illuminated by a white light.
 - 4. All signs shall be mounted at approximately right angles to the direction of traffic and at least five feet above the road surface. Signs should normally be placed six to ten feet to the right of the traveled lane and never less than one foot.
 - 5. Special care shall be taken to see that piled supplies, stored equipment, parked vehicles, etc. are not permitted to obscure any sign.
 - H. Certified flagger shall be used whenever traffic passing through the project may be required to stop because of conflicts with construction equipment or because the safe travel path cannot accommodate two-way traffic.
 - I. Certified flagger shall not be expected to guard more than one single conflict point. Where one-way traffic is required for a distance of over 100 feet, a flagman shall be assigned to each end.
 - J. Flaggers and signalmen shall be properly trained in appropriate traffic control procedures.
 - K. Flaggers and all employees working adjacent to traffic shall be required to wear an orange vest, shirt or jacket. Vests shall be reflectorized for night work.
 - L. Whenever and wherever possible and necessary, protected lights shall be used to mark fences and barricades and other such encroachments onto public streets or sidewalks.
 - M. Where covered sidewalks are required, they shall be provided with permanent lights to provide sufficient illumination for safe use by the public, day or night. All bulbs shall be cage-protected.
 - N. Public walkways, whether permanent or temporary, shall be kept clean and free of hazards at all times.
 - O. Where the Subcontractor is required to provide public walkways, they shall have an abrasive, non-slip surface.
 - P. All trenches, excavations and similar work areas, where an exposure to the public or work personnel exists, shall be promptly and completely fenced, barricaded, or securely covered, except in those areas temporarily required to be open for the conduct of work. These openings shall be guarded at the conclusion of work at the end of the day to prevent access.
 - Q. When steel plates or similar covers are used on public ways to cover excavations, they shall be subsequently secured to prevent movement imposed by traffic. Covers shall be a non-slip surface.
 - R. When such covers are located where there is pedestrian exposure, they shall be tapered at all sides with cutback cold mix or similar material to eliminate tripping hazards. Covers shall be a non-slip surface.
 - S. Buildings, trees, or other structures shall be protected from damage by materials or equipment stored adjacent to them.
 - T. Free access shall be maintained to every fire hydrant, fire alarm box, fire escape and standpipe

connection, street and traffic light control box. When required, hydrants shall be extended by simple tube or piping to an accessible point as provided by the Engineer. No obstructions shall be allowed at any time within 15 feet of a fire hydrant.

- U. The Subcontractor shall erect and maintain fences and barricades to enclose the Subcontractor's work area and provide security where required to prevent unauthorized access.

CHAPTER 4.18 Management of Silica in Construction

Purpose

In order to minimize and/or eliminate silica hazards, this program and its attachments shall provide the procedures and control measures that Coffman excavation will use to protect our employees.

Exposure to silica can cause silicosis. Silicosis is completely preventable by following measures to reduce exposures to crystalline silica. The inhalation of crystalline silica dust can also lead to chronic airway obstruction and bronchitis, tuberculosis, and possibly lung and/or stomach cancer.

A. The following activities in construction have been found to create silica hazards:

1. Chipping, hammering, and drilling rock or concrete
2. Crushing, loading, hauling, and dumping rock
3. Abrasive blasting
4. Sawing, hammering, drilling, grinding, and chipping masonry or concrete
5. Demolition of concrete or masonry structures
6. Dry sweeping or using pressurized air to blow concrete, rock, or sand dust
7. Asphalt paving
8. Cutting stone and stone products
9. Drywall sanding

Procedures

Any materials purchased or brought on-site which contain silica need to be assessed by Coffman Safety Director.

After reviewing the activities that typically take place at [Insert company name], we have found the activities below (see Table I) require engineering control methods and personal protective equipment (PPE).

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

1. Finish the mandatory training in silica hazards (see Hazard Communication Program).
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 this area.
3. Review the previous air monitoring results for the specific type of work.
4. Determine location and type of hygiene facilities available, and review hygiene requirements.

B. Jobs Not Listed

1. Before any additional tasks can be performed that may cause silica exposure (those not listed above), air monitoring must be performed.

C. Administrator

1. Coffman Safety Director will act as the program administrator, will maintain all air sampling data and records of employees approved to wear respirators (see Respirator Protection Program) and will maintain this company silica policy.

**Table 1
Respiratory Requirements for Employees**

Activity	Duration	PPE Required*	Engineering Controls	Air Sampling Available?
EXAMPLES ONLY				
Roto-hammer	>One hour	Paper dust mask (NIOSH approved)	Minimize dust when possible	Yes
Surface grinding of concrete	>One minute	½ face tight fitting w/HEPA filter	Shroud around grinder w/HEPA vacuum	Yes
Concrete demolition (by hand)	>One minute	½ face tight fitting w/HEPA filter	Keep materials wet	Yes
Hot saw cutting	>One minute	Paper dust mask (NIOSH approved)	Wet method, water directed at cutting blade	Yes

CHAPTER 4.19 BLOODBORNE PATHOGENS

Introduction

Coffman Excavation has developed a blood borne pathogen program to enhance our employees' health and safety.

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

A. Collateral Duty Clause

- Good Samaritan acts are not covered under the blood borne pathogen standard, but it is our policy
- Provide evaluation and treatment of employees who sustain exposure to blood or other potentially infected materials while voluntarily assisting an injured employee.
- If you are exposed to blood or other potentially infectious materials, or when these hazards are identified, contact Coffman Safety Director.
- 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.

B. Exposure Control Plan

- a. An exposure incident to blood borne pathogens is defined as an eye, mouth, other mucous membrane; non-intact skin; or parenteral contact with blood or other potentially infectious materials that result 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.
- b. If you are exposed to blood or other potentially infectious materials, follow these procedures:
- c. Wash the contaminated skin immediately with soap and water.
- d. Immediately flush contaminated eyes or biohazard mucous membranes with copious amounts of water.
- e. Medically evaluate exposed employees as soon as possible after the exposure incident so post-exposure prophylaxis, if recommended, can be initiated promptly.
- f. Report the incident to your superintendent and Coffman Safety Director before the end of the workshift, and include:
 - i. Names of all involved
 - ii. Date and time
 - iii. How the incident occurred
- g. An exposure report will be performed by Coffman Safety Director and will be available to all employees (and OSHA, upon request).

C. Employees at Risk

- a. We do not anticipate employees routinely being exposed to these hazards. However, below are the employees at risk and the task or procedure that may cause contact with blood borne pathogens.
 - i. If employees are routinely exposed to blood borne pathogens or other potentially infected materials, a full blood borne pathogens exposure control program will be provided, and further training will be given.
 - ii. If you are performing a task where you may have reasonable contact with Blood borne pathogens, please contact Coffman Safety Director. Clean up activities of blood borne pathogens are included.

Job Classification	Task or Procedure

These jobs and tasks will be maintained on file by the Human Resources Department

D. Training.

- a. Training will be conducted prior to employees performing these tasks, or before any anticipated exposure to blood borne pathogens.

E. Universal Precautions

- a. Universal precautions is 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 blood borne pathogens. Consider difficult- or impossible-to-identify body fluids as potentially infectious.
- b. Any task which may put an employee in contact with blood borne pathogens should use the following procedures:
- c. Clean up blood spills or body fluids as soon as possible.
- d. Use disposable absorptive materials, such as paper towels or gauze pads, to soak up the fluids.
- e. Clean the area with chemical germicides or a 1:10 solution of liquid bleach.
- f. Place absorptive towels, pads, and other material used to mop up spills in plastic bags or designated, labeled containers and treat as biohazardous waste.
- g. 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 wipes or germicidal gels to clean hands after removing gloves.
- h. Employees must wash their hands with soap and water as soon as possible.

F. Statement of Declination

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

- b. 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.

G. Employee's Statement of Declination

- a. 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 Signature: _____

Date: _____

CHAPTER 4.20
Control of Energy Sources: Lockout/Tagout

Purpose

Coffman Excavation 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.

- A. 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.
- B. 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.
 - 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 electrical, mechanical energy sources.
 - 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
- C. 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 is 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.*

1. Increased or additional hazards: interruption of life support equipment, deactivation of emergency alarm systems
2. Infeasibility due to equipment design: testing on electric circuits that can only be performed with the circuit energized

D. Responsibility

1. Supervisors/safety director are responsible for providing instruction on the lockout/tagout procedures and the safety significance as outlined in the training requirements of this program. Supervisors/safety director are responsible for conducting periodic audits to ensure that proper lockout/tagout procedures are being followed and to record the results of the audit. Audits must be done on an annual basis at minimum.
2. The management/safety department is responsible to see that the overall policy is developed and work with maintenance and construction supervisors, the safety committee, and employees to ensure implementation.
3. Authorized employee: A person who locks out or tags out machines or equipment in order to perform service or maintenance on that machine or equipment.
 - a. It is the trained, authorized employee's responsibility to follow this program. Employees are to use their individually assigned lock and key. No other person shall be allowed access to your key or your lock. No one is allowed to remove your lock except as prescribed in this policy.
 - b. Locks come with two keys; it is Oregon OSHA's standard and our company policy for the authorized employee to have the only key to his/her assigned lock. The other key is discarded or destroyed. There is no master key for our locks.
4. Affected employees: employees whose job requires him/her to operate or use equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires him/her to work in the immediate area in which such service and maintenance is being performed.
 - a. An affected employee's responsibility is to ensure that they do not attempt to operate any equipment being locked-out/tagged-out and follow all safety procedures in shut down and restarting equipment.
5. All other employees: employees who may see lockout/tagout on equipment are to honor the locks and tags and make no attempt to start or remove the devices.

E. Training

1. A key component of this program is employee training. It is the supervisor's/safety director's responsibility to see that all employees involved in this program are trained. The authorized employees are to receive additional specialized training as outlined in this program. The lockout/tagout training documentation must include a training course summary, training date, and employee name.

F. Basic Lockout/Tagout Procedures

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.
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. 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.

G. 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.

1. Typical conditions requiring lockout/tagout devices include:
 - a. 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).
 - b. When working on systems that contain hazardous substances or high-pressure lines, the systems should be clearly marked. The 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.
 - c. No employee shall attempt to operate any switch, valve, or other energy isolating device bearing a lockout/tagout device.
2. 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. Other basic controls may be needed to control the type(s) of energy present:
 - a. Hydraulic energy: close valve and bleed offline or block the device.
 - b. 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.
 - c. Springs: attach a hold-down device or leave in open position where no stored energy is present.
 - d. Fluid flow – water pressure: ensure proper gate devices are used that hold the back pressure or drain lines so no fluid pressure is present.

H. Lockout/Tagout Hardware (Equipment)

1. Locks, tags, and hasps will be used as energy isolating devices. Valves with handle and lock attachment holes will be locked out. If the locks become damaged in any way, immediately seek a replacement lock.
2. Valves not capable of being locked out will have tags placed on them with a slip lock plastic attachment device capable of withstanding 50 pounds of pressure.
3. Hardware is required to meet the following criteria:
 - a. Able to withstand weather and all types of exposures
 - b. Standardized by color, shape, size, or format
 - c. Contain locks substantial enough that they cannot be removed without excessive force
 - d. Singularly identifiable
 - e. Device must only be used for controlling energy, not for any other purpose
 - f. Tags must be substantial enough to prevent inadvertent or accidental removal
 - g. Lockout/tagout devices shall indicate the identity of employee applying device.
 - h. Tag must have a written warning on it, i.e., **Do Not Start – Locked Out.**
4. Locks, tags, hasps, chains, and other restraining devices will be kept by each authorized employee. Additional locks and equipment will be kept on the job shack or service truck. Each supervisor will assure that the location of the lockout equipment has appropriate supplies and will procure additional lockout equipment as necessary.
***Remember, prior to the start of work that places an employee in danger of hazardous energy release, the authorized employee(s) must place their personal lock and tag on the energy isolating device.

I. Sequence for a Lockout/Tagout Procedure

1. The lockout/tagout procedure must be conducted in the following manner. No deviations will be tolerated.
 - a. The authorized employee shall notify the affected employees that the lockout/tagout system is going to be utilized.
 - b. 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.
 - c. 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.
 - d. 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.
 - e. 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. *****

- f. 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.

J. Equipment Testing Under Lockout/Tagout

1. At times, some of our equipment must be tested or positioned while doing maintenance or repair. The following procedure must be followed under those conditions:
 - a. Clear the machine or equipment of all non-essential tools and materials.
 - b. Ensure that all employees are clear of the machine or equipment and notify them that the machine will be energized.
 - c. The authorized employee(s) shall remove their lock.
 - d. Energize and proceed with the testing or positioning
 - e. De-energize all systems and complete the shutdown and lockout/tagout procedures before continuing any further maintenance or service.

K. Restoring Operating Equipment to Normal Operational Status

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:
2. The authorized person(s) shall inspect the work area to make sure that all of tools have been removed from the machine and to ensure that the machine or equipment components are operationally intact.
3. Check the work area to ensure that all employees have been safely positioned.
4. Notify all of the affected employees that the equipment is to be restarted.
5. Remove lockout and tagout device.
6. Notify affected employees that the service or maintenance is completed and the machine or equipment is ready for use.

L. Removal by Someone Other Than the Person That Applied the Lock

1. 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:
 - a. The project manager or supervisor will verify that the authorized employee who applied for the device is not at the facility by checking with the immediate supervisor and co-workers.
 - b. 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.
 - c. 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.
 - d. 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.

M. Procedure Involving More Than One Person

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).

N. Shift or Personnel Changes

1. During shift or personnel changes, the hazardous energy control responsibility will be transferred in a manner that maintains uninterrupted protection for the employees involved.
 - a. All employees in the immediate affected work area shall be informed of the transfer of lockout/tagout devices between the off-going and incoming shifts.
 - b. Incoming shift employees must verify the equipment has been de-energized and proper procedures have been followed.

- c. The incoming authorized employee(s) shall apply his/her own lockout/tagout device to the energy control source prior to the removal of the lockout/tagout device by the off-going authorized employee(s).
- d. The incoming authorized employee(s) shall ensure that no personnel are exposed, and as a check that all energy sources are disconnected, operate the push button or other normal operating controls to make certain the equipment will not operate. Return operating control(s) to the "off" position after the test.

O. Contractors

1. When working with other contractors, their activities may create hazards which normally are not present to our regular employees.
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.
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.

P. Periodic Inspection

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.
 - a. The management/safety director 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.
 - b. The periodic inspection will be conducted by an authorized employee not involved in the energy control procedure being inspected. The inspector must determine three issues:
 1. Whether the steps in the energy control procedure are being followed.
 2. Whether the employees involved know their responsibilities under the procedure.
 3. Whether the procedure is adequate to provide necessary protection and if changes are needed.
 - c. 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.
 - d. The supervisor/safety director 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.

Q. Employee Training

1. The purpose of training is to provide information to employees regarding the following:
 - a. Recognition of hazardous energy sources
 - b. Type and magnitude of energy available in the workplace
 - c. Function and purpose of the energy control program
 - d. To ensure that each worker has the knowledge and skill for the safe application, usage, and removal of energy blocking devices.
 - e. Methods and means necessary for energy isolation and control

**Lockout/Tagout
Energy Control Procedures
Specific to Each Machine**

Preparation for Shut Down

1. Identify equipment to be shut down: _____
2. Location in facility: _____
3. Procedures to notify all **affected employees**: _____

4. Identify **all** power sources:
 - a. Electrical: _____
 - b. Air: _____
 - c. Steam: _____
 - d. Hydraulic: _____
 - e. Gravity: _____
 - f. Other: _____
5. Identify lockout/tagout devices to be used: _____

Shutdown

Description of the shutdown procedures: _____

Isolation

Procedures for isolation of equipment from **all** power sources: _____

Lockout/Tagout Device Application

Procedure for locking out of tagging out equipment: _____

List authorized employees using this procedure. Has the employee been trained in the procedure?

Employee name: _____	Yes	No
Employee name: _____	Yes	No
Employee name: _____	Yes	No
Employee name: _____	Yes	No

Release of Stored Energy

Do **authorized** employees know the location of the written procedure? Yes No

Do **authorized** employees have access to the procedure? Yes No

Are **affected** employees notified when the procedure is being used? Yes No

Have **affected** employees been trained to recognize when the procedure is being used and instructed not to remove lockout/tagout devices or start de-energized equipment? Yes No

Can energy-isolating devices be locked out Yes No

Note: When you replace, renovate or modify machines and equipment, ensure that the energy-isolating devices will accept lockout devices. New equipment and equipment renovated or modified after January 2, 1990, must be capable of being locked out.

Did each **authorized** employee lock out all energy sources? Yes No

Does this procedure involve group lockout/tagout? Yes No

Did the **authorized** employees verify that the equipment was de-energized? Yes No

Did the **authorized** employees follow the lockout/tagout procedure? Yes No

If not, list and describe the deficiencies requiring corrective action.

1. _____
2. _____
3. _____
4. _____
5. _____

If this is a lockout procedure, did the inspector review with all **authorized** and affected employees their responsibilities under procedure? Yes No

Note: A review can be accomplished by meeting with employees individually or in a group.

If this is a tagout procedure, did the inspector review with all **authorized** and affected employees their responsibilities under the procedure? Yes No

Note: A review can be accomplished by meeting with employees individually or in a group.

Does the lockout/tagout procedure adequately protect employees
Procedures for the release of stored energy (where applicable): _____

Verification of Isolation

Procedures to ensure that equipment is isolated from **all** power sources: _

Startup

1. Visual inspection of the machine and equipment. Ensure all tools have been removed. Return guards to place.
2. Notify all **affected employees** and **other** employees of the startup.
3. Remove all lockout/tagout devices and restore power.

Lockout/Tagout Inspection Form

Note to employers: Use this form to document an inspection of a written lockout or tagout procedure.

Department: _____

Equipment type : _____

Serial #: _____

Inspection conducted by: _____

Equipment location: _____

Inspection date: _____

CHAPTER 4.21

Fall Protection and Walking Working Surfaces

Introduction

Approximately 40% of fatal injuries in the construction industry are due to falls. At Coffman Excavation, 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.

A. Responsibilities

1. Management
 - a. Management is responsible for the administration of this program and will audit and make changes when necessary to ensure the success of the program.
2. Program Administrator/Safety Director
 - a. Develop specific policies and procedures pertaining to fall protection and walking working surfaces
 - b. Implement a training program based on the general principles of fall protection and walking working surfaces
 - c. Coordinate the training for fall protection and walking working surfaces
 - d. Maintain the training certification records of employee training sessions
 - e. Review the effectiveness of the program
3. Supervisors
 - a. Ensure that employees have received appropriate training at their jobsites
 - b. Provide observations and feedback to employees to ensure jobsite safety
 - c. Ensure that fall protection equipment is properly inspected and maintained in a safe operating condition
 - d. Provide program feedback to the safety director
4. Employees
 - a. Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences or barricades when the excavations are not readily seen because of plant growth or other visual barriers(s). Utilizing personal fall arrest systems (PFAS) or other fall protection equipment on which they have been specifically trained and authorized
 - b. Work in a safe manner and utilize safe work practices
 - c. Inspect the fall protection equipment at the beginning of day or prior to each work shift
 - d. Report all equipment defects to supervisors immediately
 - e. Wear appropriate personal protective equipment
 - f. Notify supervisor of jobsite conditions where safety hazards exist

Definitions

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

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

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

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

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 carabineer, or it may be an integral component of part of the system.

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.

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

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

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.

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

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.

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

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

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.

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

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

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

Positioning device system: 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

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

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

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.

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

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.

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

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

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.

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

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

B. Fall Protection Systems

1. Covers
 - a. All covers will be secured to prevent accidental displacement.
 - b. Covers will be marked with "HOLE" or "COVER."
 - c. Covers located in roadways will be capable of supporting twice the axle load of the largest vehicle that might cross them.
 - d. Covers will be capable of supporting twice the weight of employees, equipment, and materials that may cross them.
2. Guardrail Systems
 - a. 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.
 - b. Top rails will be:

- * At least ¼ inch in diameter (steel or plastic banding is unacceptable)
 - * Flagged every six feet or less with a high visibility material if wire rope is used
 - * Inspected by competent person as frequently as necessary to ensure strength and stability
 - * Forty-two inches (plus or minus three inches) above the walking/ working level
 - * Capable of withstanding at least 200 pounds of force applied in any direction on the toprail without failure
 - * Adjusted to accommodate the height of stilts, if they are in use
- c. Mid-rails will be:
- i. Constructed of screens, mesh, intermediate vertical members, and/or solid panels
 - ii. A minimum of 21 inches high
 - iii. Capable of withstanding at least 150 pounds of force applied in any direction on the mid-rail without failure
- c. 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. Personal Fall Arrest Systems (PFAS)+
- a. 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:
- i. Limit the maximum arrest force to 1,800 pounds
 - ii. Be rigged so an employee cannot free fall more than six feet or contact any lower level
 - ii. Bring an employee to a complete stop and limit the maximum deceleration distance traveled to 3½ feet
 - iii. Be inspected prior to each use for damage and deterioration
 - iv. Be removed from service if any damaged components are detected
- b. 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.
- i. Do not use non-locking snap hooks
 - ii. D-rings and locking snap hooks will:
 - Have a minimum tensile strength of 5,000 pounds
 - Be proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or suffering permanent deformation
 - iii. Lifelines will be:
 - Designed, installed, and used under the supervision of a qualified person
 - Protected from cuts and abrasions
 - iv. Self-retracting lifelines and lanyards must have ropes and straps (webbing) made of synthetic fibers, and will:
 - *Sustain a minimum tensile load of 3,600 pounds if they automatically limit freefall distance to two feet
 - *Sustain a minimum tensile load of 5,000 pounds (includes rip stitch, tearing, and deforming lanyards)
 - v. Anchorages must support at least 5,000 pounds per person attached and will be:
 - *Designed, installed, and used under the supervision of a qualified person
 - *Capable of supporting twice the weight expected to be imposed on it
 - *Independent of any anchorage used to support or suspend platforms.
4. Personal Fall Restraint Systems
- a. Personal fall restraint systems will be rigged to prevent the user from falling any distance.

- b. Fall restraint systems will use fall arrest system components and follow manufacturers' instructions.
- c. The attachment point to the body belt or full body harness may be at the back, front, or side D-rings.
 - 1. 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.
 - 2. Positioning Device Systems
 - 3. 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.
 - 4. Safety Monitoring System
 - a. Safety monitoring system will only be used as a fall protection system for roofing work on roofslopes of 2 in 12 or less.
 - b. The use of a safety monitoring system is not allowed on roofs more than 50 feet in width.
 - c. 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:
 - * The safety monitor will be competent to recognize fall hazards.
 - * 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.
 - * The safety monitor will be on the same walking/working surface and within visual sight distance of the employees being monitored.
 - * The safety monitor will be close enough to communicate orally with the employees.
 - * The safety monitor will not have other responsibilities that may take the monitor's attention from the monitoring function.
 - d. Mechanical equipment will not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations.
 - e. Only employees engaged in roofing work will be allowed in an area where employees are being protected by the safety monitoring system.
 - 5. Safety Net Systems
 - a. 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.
 - b. 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.
 - c. 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.
 - d. When nets are used on bridges, the potential fall area from the walking/working surface will remain unobstructed.

- e. Objects that have fallen into safety nets will be removed as soon as possible and at least before the next working shift.

6. Warning Line Systems

- a. A warning line system will not be used as fall protection on roof slopes greater than 2 in 12.
 - b. Warning line systems consisting of supporting stanchions and ropes, wires, or chains will be erected around all sides of roof work areas.
- Lines will be flagged at six-foot intervals with high visibility materials.
 - The lowest point of the line (including sag) will be between 34 and 39 inches from the walking/working surface.
 - Stanchions of warning line systems will be capable of resisting at least 16 pounds of force.
 - Ropes, wires, or chains will have a minimum tensile strength of 500 pounds.
 - The warning line systems will be erected at least six feet from the edge, except in areas where mechanical equipment is in use. When mechanical equipment is in use, warning line systems will be erected at least six feet from the parallel edge, and at least 10 feet from the perpendicular edge.
- c. Employees will be allowed in the area between a roof edge and a warning line when the employees are equipped with appropriate fall protection.

7. Falling Object Protection

- a. 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.
- b. No materials (except masonry and mortar) will be stored within four feet of working edges.
- c. Excess debris will be removed regularly to keep work areas clear.
- d. During roofing work, materials and equipment will be stored at least six feet from the roof edge unless guardrails are erected at the edge.
- e. Stacked materials must be stable and self-supporting.
- f. Canopies will be strong enough to prevent penetration by falling objects.
- g. Toe boards erected along the edges of overhead walking/working surfaces will be:
 - Capable of withstanding a force of at least 50 lbs.
 - Solid, a minimum of 3½ inches tall, and no more than ¼ inch clearance above the walking/working surface
- h. Equipment will not be piled higher than the toe board unless paneling or screening has been erected above the toe board.

B. Training

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.

- 1. 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:
 - a. Nature of the fall hazards employees may be exposed to
 - b. Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems

- c. Use and operation of controlled access zones, guardrails, personal fall arrest systems, safety nets, warning lines, and safety monitoring systems
 - d. Role of each employee in the Safety Monitoring System (if this system is used)
 - e. Limitations of the use of mechanical equipment during roofing work on low sloped roofs.
 - f. Correct procedures for equipment and materials handling, and storage and erection of overhead protection
 - g. Requirements of the OR-OSHA Fall Protection Standard, 29 CFR 1926, Subpart M
2. 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.
3. The latest training certification will be maintained by the safety department. Retraining for an employee will occur with any of the following situations:
- a. Changes in the workplace render previous training obsolete.
 - b. Changes in the types of fall protection systems or equipment to be used render previous training obsolete.
 - c. 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.

Fall Protection Work Plan

Trade or Sub: _____

Date: _____

Report Prepared By: _____

1. Specific Work Area:

2. Activities:

3. Identified hazards in the work area:

4. Check methods of fall restraint or arrest to be used:

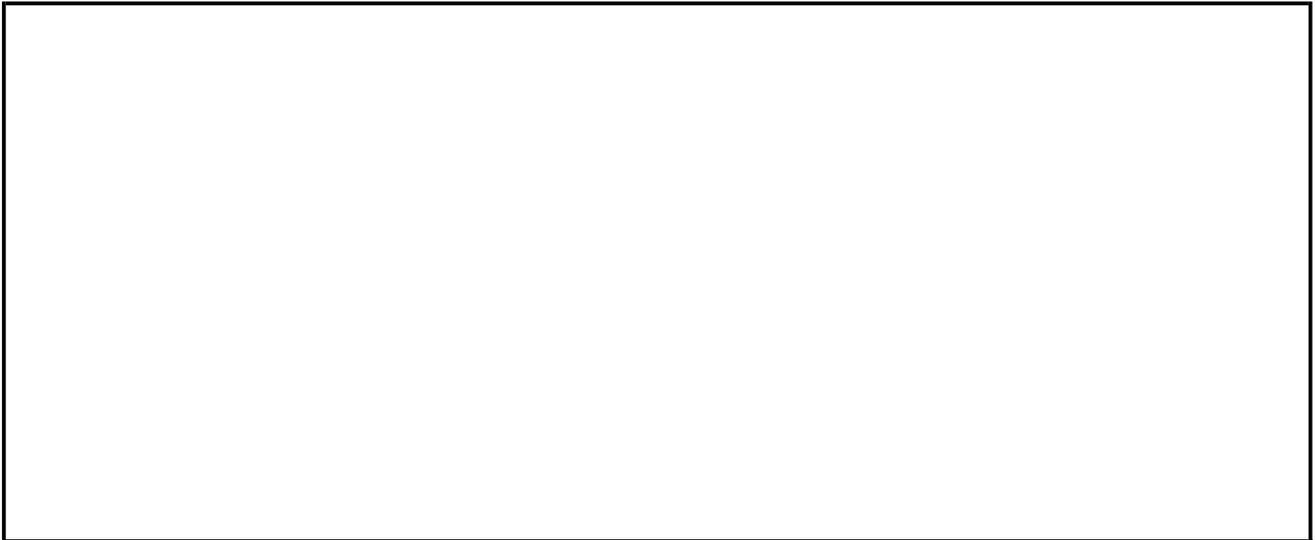
- | | |
|---|---|
| Standard guardrail, top, mid, and toe board | Float |
| Double lanyard system | Secured to existing strut |
| Safety nets | Tie off point capable of withstanding 5000lb. |
| Horizontal lifeline | Restraint Line |
| Full body harness | Shock absorber lanyard |
| Scaffold with guardrail and toe boards | Beam seat |
| Drop line/Rope grab | Boom Lift |
| Scissor Lift | Other (specify) |

5. Describe procedures for assembly, maintenance, inspection and disassembly of system (attach separate sheet if more space is needed):

6. Describe procedures for handling and securing tools and equipment and for providing overhead protection for workers (attach a separate sheet if necessary).

7. Describe the designated method for prompt, safe removal of injured workers.

8. This space is provided for a stick figure drawing of the system configuration.



9. I certify that I have received fall protection orientation including the material covered in this plan.

Employee Name	Date	Employee Name	Date

This plan has been prepared as a general guideline in preparing a fall protection work plan.

Submit this plan to the Safety Department for each new activity.

CHAPTER 4.22

Fire Prevention Program

Objective

The purpose of this Fire Prevention Program is to eliminate the causes of fire; prevent loss of life, injury, and property by fire; and to comply with the Occupational Safety and Health Administration's (OSHA) standard on fire prevention, 29 CFR 1926.150 and 1910.38. It provides employees with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards.

A. Background

1. Coffman Excavation is committed to minimizing the threat of fire to employees, visitors, and property. Coffman Excavation complies with all applicable laws, regulations, codes, and best practices regarding fire prevention. The separate Emergency Action Plan outlines the procedures for responding to fires and other emergencies. This Fire Prevention Program serves to reduce the risk of fires at fixed facilities and jobsite locations in the following ways:
 - a. Identifies materials that are potential fire hazards and the proper handling and storage procedures
 - b. Identifies potential ignition sources and the proper control procedures of those materials
 - c. Describes fire protection equipment and/or systems used to control fire hazards
 - d. Identifies persons responsible for maintaining the equipment and systems installed to prevent or control ignition of fires
 - e. Identifies persons responsible for the control and accumulation of flammable or combustible material
 - f. Describes good housekeeping procedures necessary to ensure the control of accumulated flammable and combustible waste material and residues to avoid a fire emergency
 - g. Provides training to employees regarding fire hazards to which they may be exposed

B. Responsibility

1. Fire safety is everyone's responsibility. All employees should know how to prevent and respond to fires and are responsible for adhering to the company policy regarding fire emergencies.
 - i. Management approves the [Insert company name]'s fire prevention and protection policies. The company will provide adequate controls, resources, and training to its employees to provide a safe workplace that encourages fire prevention and the safest possible response in the event of a fire emergency.
 - ii. The ERS manager will manage the Fire Prevention Program for the company and maintain all records. The EHS manager shall also:
 - i. Develop and administer the company's fire prevention training program
 - ii. Ensure that fire control equipment and systems are properly maintained
 - iii. Control fuel source hazards
 - iv. Conduct Fire Risk Surveys (see Appendix A) and make recommendations
 - iii. Supervisors are responsible for ensuring that employees receive appropriate fire safety training, and for notifying the safety director when changes in operation increase the risk of fire. Supervisors are also responsible for enforcing the fire prevention and protection policies.
 - iv. Employees shall:

- i. Complete required training before working without supervision.
- ii. Conduct operations safely to eliminate or reduce the risk of fire.
- iii. Report potential fire hazards to their supervisors.
- iv. Follow fire emergency procedures.

C. Operations

1. Good housekeeping limits the risk of fires. Employees shall take the following precautions:
 - i. Minimize the storage of combustible materials.
 - ii. Make sure that doors, hallways, stairs, and other exit routes are kept free of obstructions.
 - iii. Dispose of combustible waste in covered, airtight, metal containers.
 - iv. Use and store flammable materials in well-ventilated areas away from ignition sources.
 - v. Use only nonflammable cleaning products.
 - vi. Keep incompatible (i.e., chemically reactive) substances away from each other.
 - vii. Perform “hot work” (i.e., welding or working with an open flame or other ignition sources) in controlled and well-ventilated areas.
 - viii. 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).
 - ix. Ensure that heating units are safeguarded.
 - x. Report all gas leaks immediately to the supervisor. All gas leaks shall be repaired immediately upon notification.
 - xi. Repair and clean up flammable liquid leaks immediately.
 - xii. Keep work areas free of dust, lint, sawdust, scraps, and similar material.
 - xiii. Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
 - xiv. Ensure that required hot work permits are obtained.
 - xv. Turn off electrical equipment when not in use.
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.
 - i. The following equipment is subject to maintenance, inspection, and testing procedures:
 - i. Equipment installed to detect fuel leaks, control heating, and control pressurized systems
 - ii. Portable fire extinguishers, automatic sprinkler systems, and fixed extinguishing systems
 - iii. Detection systems for smoke, heat, or flame
 - iv. Fire alarm systems
 - v. Emergency backup systems and the equipment they support

D. Types of Hazards

1. The following address the major workplace fire hazards at Coffman Excavation’s facilities and jobsite locations, and the procedures for controlling the hazards.
2. Electrical fire hazards, electrical system failures, and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

- a. To prevent electrical fires, employees shall:
 - Make sure that worn wires are replaced by a qualified person.
 - Use only appropriately rated fuses.
 - Never use extension cords as substitutes for wiring improvements.
 - Use only approved extension cords, e.g., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label.
 - Check wiring in hazardous locations where the risk of fire is especially high.
 - Check electrical equipment to ensure that it is either properly grounded or double insulated.
 - Ensure adequate spacing while performing maintenance.
- b. 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
- c. 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:
 - Avoid overloading circuits with office equipment.
 - Turn off nonessential electrical equipment at the end of each workday.
 - Keep storage areas clear of rubbish.
 - Ensure that extension cords are not placed under carpets.
 - Ensure that trash and paper set aside for recycling is not allowed to accumulate.
- d. Cutting, welding, and open flame work—ensure the following:
 - All necessary hot work permits have been obtained prior to start of work.
 - Cutting and welding are done by qualified and authorized personnel in designated cutting and welding areas whenever possible.
 - Adequate ventilation is provided.
 - Torches, regulators, pressure-reducing valves, and manifolds are UL listed, or FM approved.
 - Oxygen-fuel gas systems are equipped with listed and/or approved backflow valves and pressure-relief devices.
 - Cutters, welders, and helpers wear eye protection and appropriate protective clothing to prevent injury.
 - Cutting or welding is prohibited in areas with sprinklers, while sprinkler protection is out of service.
 - Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues or accumulations in confined spaces.
 - Cutting or welding is prohibited on metal walls, ceilings, or roofs built of combustible, sandwich-type panel construction or having combustible covering.
 - 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.
 - Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.
 - Fire watch has been established.

- e. Flammable and combustible materials will regularly be evaluated by the safety director. This is completed using Flammable and Combustible Materials Checklist(see Appendix B).
- f. 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.
- g. To handle Class A combustibles safely:
 - Dispose of waste daily.
 - Keep trash in metal receptacles with tight-fitting covers (metal wastebaskets that are emptied every day do not need to be covered).
 - Keep work areas clean and free of fuel paths that could allow a fire to spread.
 - Keep combustibles away from accidental ignition sources, such as hot plates, soldering irons, or other heat- or spark-producing devices.
 - Store paper stock in metal cabinets.
 - Store rags in metal bins with self-closing lids.
 - Do not order and/or store excessive amounts of combustibles.
 - Make frequent inspections to anticipate fires before they start.
- h. 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.)
- i. Class B combustibles include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols. To handle Class B combustibles safely:
 - 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).
 - 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.
 - 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.
 - 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).
 - Do not use, handle, or store Class B combustibles near exits, stairs, or any other areas normally used as exits.
 - Do not weld, cut, grind, or use unsafe electrical appliances or equipment near Class B combustibles.
 - Do not generate heat, allow an open flame, or smoke near Class B combustibles.
 - Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.

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.

- i. Smoking is prohibited in all company vehicles, facilities and jobsites.
Smoking is allowed in jobsite designated smoking areas only.

4. **Training**

The EHS manager will provide basic fire prevention training to all employees upon employment, and will maintain documentation of the training, which includes:

- a. Review of 29 CFR 1926.150 and 1910.38 and how it may be accessed.
- b. This fire prevention program
- c. Good housekeeping practices
- d. Proper response and notification in the event of a fire
- e. Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan)
- f. Recognition of potential fire hazards. 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:
 - 1. Upon initial assignment
 - 2. Annually
 - 3. When changes in work processes dictate additional training

5. **Program Review**

The EHS manager will review this program annually and make necessary changes.

Appendix B

Coffman Excavation Flammable and Combustible Materials Checklist

Use this checklist to evaluate [Insert company name]'s compliance with OSHA's standards on flammable and combustible materials.

- Yes No Are combustible scrap, debris, and waste materials such as oily rags stored in covered metal receptacles and removed from the worksite promptly?
- Yes No Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?
- Yes No Are all connections on drums and combustible liquid piping vapor and liquid tight?
- Yes No Are all flammable liquids kept in closed containers when not in use?
- Yes No Are metal drums of flammable liquids electrically grounded during dispensing?
- Yes No Do storage rooms for flammable and combustible liquids have appropriate ventilation systems?
- Yes No Are No Smoking signs posted on liquefied petroleum gas tanks?
- Yes No Are all solvent wastes and flammable liquids kept in fire-resistant covered containers until they are removed from the worksite?
- Yes No Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?
- Yes No Are fuel gas cylinders and oxygen cylinders separated by distances or fire-resistant barriers while in storage?
- Yes No Are fire extinguishers appropriate for the materials in the areas where they are mounted?
*
- Yes No Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials?*
- Yes No Are extinguishers free from obstruction or blockage? *
- Yes No Are all extinguishers serviced, maintained, and tagged at least once a year? *
- Yes No Are all extinguishers fully charged and in their designated places? *
- Yes No Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment?

- Yes No Are No Smoking signs posted in areas where flammable or combustible materials are used or stored?
- Yes No Are safety cans utilized for dispensing flammable or combustible liquids at the point of use?
- Yes No Are all spills of flammable or combustible liquids cleaned up promptly?
- Yes No Are storage tanks adequately vented to prevent the development of an excessive vacuum or pressure that could result from filling, emptying, or temperature changes?

*Note: Use of fire extinguishers is based on company policy regarding employee firefighting in your Emergency Action Plan and local fire code.

Completed by: _____ Date: _____

Appendix C

Coffman Excavation General Fire Prevention Checklist

Use this checklist to ensure fire prevention measures conform to the general fire prevention requirements found in OSHA standards.

- Yes No Is the local fire department acquainted with your facility, its location, and specific hazards?
- Yes No If you have a fire alarm system, is it tested at least annually?
- Yes No If you have interior stand pipes and valves, are they inspected regularly?
- Yes No If you have outside private fire hydrants, are they on a routine preventive maintenance schedule and flushed at least once a year?
- Yes No Are fire doors and shutters in good operating condition?
- Yes No Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
- Yes No Are automatic sprinkler system water control valves, air pressure, and water pressure checked weekly or periodically?
- Yes No Has responsibility for the maintenance of automatic sprinkler systems been assigned to an employee or contractor?
- Yes No Are sprinkler heads protected by metal guards?
- Yes No Is proper clearance maintained below sprinkler heads?
- Yes No Are portable fire extinguishers provided in adequate number and type?*
- Yes No Are fire extinguishers mounted in readily accessible locations?*
- Yes No Are fire extinguishers recharged regularly with the recharge date noted on an inspection tag?*
- Yes No Are employees periodically instructed in the use of extinguishers and fire protection procedures?*

*Note: Use of fire extinguishers is based on company policy regarding employee firefighting in your Emergency Action Plan and local fire code.

Completed by: _____ Date: _____

Appendix D

Coffman Excavation Exit Checklist

Use this checklist to evaluate [Insert company name]'s compliance with OSHA's standard on emergency exit routes.

- Yes No Is each exit marked with an exit sign and illuminated by a reliable light source?
- Yes No Are the directions to exits, when not immediately apparent, marked with visible signs?
- Yes No Are doors, passageways, or stairways that are neither exits nor access to exits, and which could be mistaken for exits, marked "Not an Exit" or other appropriate marking?
- Yes No Are exit signs provided with the word "EXIT" in letters at least five inches high and with lettering at least one inch wide?
- Yes No Are exit doors side-hinged?
- Yes No Are all exits kept free of obstructions?
- Yes No Are there at least two exit routes provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
- Yes No Is the number of exits from each floor of a building and from the building itself appropriate for the building occupancy? (Note: Do not count revolving, sliding, or overhead doors when evaluating whether there are sufficient exits.)
- Yes No Are exit stairways that are required to be separated from other parts of a building enclosed by at least one-hour, fire-resistant walls (or at least two-hour, fire-resistant walls in buildings over four stories high)?
- Yes No Are the slopes of ramps used as part of emergency building exits limited to one foot vertical and 12 feet horizontal?
- Yes No Are glass doors or storm doors fully tempered, and do they meet the safety requirements for human impact?
- Yes No Can exit doors be opened from the direction of exit travel without the use of a key or any special knowledge or effort?
- Yes No Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it's padlocked or otherwise locked on the outside?
- Yes No Where exit doors open directly onto any street, alley, or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic?

Completed by: _____ Date: _____

CHAPTER 4.23 Fleet Safety

Purpose

The purpose of this policy is to ensure the safety of those individuals who drive company vehicles. Vehicle accidents are costly to the company, but more importantly, they may result in injury to employees and others. It is the driver's responsibility to operate the vehicle in a safe manner and to drive defensively to prevent injuries and property damage. The company endorses all applicable state motor vehicle regulations relating to driver responsibility. The company expects each driver to drive in a safe and courteous manner. The attitude you take when behind the wheel is the single most important factor in driving safely.

1. Driver Eligibility

- a. Company vehicles are to be driven by authorized employees only, except in emergencies, or in case of repair testing by a mechanic. Spouses, family members, or other acquaintances are *not* authorized to drive a company vehicle.
- b. Any employee who has a driver's license revoked or suspended shall immediately notify Coffman Safety Director, and discontinue operation of the company vehicle. Failure to do so may result in disciplinary action, including termination of employment.
- c. All accidents, regardless of severity, must be reported to the police and to Coffman Safety Director. Failing to stop after an accident and/or failure to report an accident may result in disciplinary action, including termination of employment.
- d. Drivers must immediately report all summonses received for moving violations during the operation of a company vehicle to Coffman Safety Director.
- e. All commercial driver license (CDL) drivers must comply with all applicable Department of Transportation (DOT) regulations, including successful completion of medical, drug, and alcohol evaluations.
- f. Motor vehicle records may be ordered periodically to assess employees' driving records. An unfavorable record will result in the loss of the privilege of driving a company vehicle.
- g. The following system is used to determine eligibility to operate a company vehicle:
 - All Type A violations (as defined below) will result in the termination of driving privileges for employees and will disqualify any potential driver employees.
 - Any drivers (employees or applicants) showing one of the following will be restricted from driving company vehicles:
 - i. One or more Type A violations in the last three years.
 - ii. Three or more accidents (regardless of fault) in the last three years.
 - iii. Three or more Type B violations in the last three years.
 - iv. Any combination of accidents and Type B violations which equal four or more in the last three years.

2. Type A Violations

- ii. Driving while intoxicated
- iii. Driving under the influence of drugs
- iv. Negligent homicide arising out of the use of a motor vehicle (gross negligence)
- v. Operating during a period of suspension or revocation
- vi. Using a motor vehicle for the commission of a felony
- vii. Aggravated assault with a motor vehicle
- viii. Operating a motor vehicle without the owner's authority (grand theft)
- ix. Permitting an unlicensed person to drive
- x. Reckless driving
- xi. Speed contest (racing)
- xii. Hit and run (bodily injury or property damage)

3. Type B Violations

All moving violations not listed as Type A violations

Driver Safety Rules

- A. The use of a company vehicle while under the influence of intoxicants and other drugs is forbidden and is sufficient cause for discipline, including termination of employment.
- B. No driver shall operate a company vehicle when his/her ability to do so safely has been impaired by illness, fatigue, injury, or prescription medication.
- C. All drivers and passengers operating or riding in company vehicles must wear seat belts, even if airbags are available.
- D. No unauthorized personnel (e.g. hitchhikers) are allowed to ride in company vehicles.
- E. Drivers are responsible for the security of company vehicles assigned to them. The vehicle engine must be shut off, ignition keys removed, and vehicle doors locked whenever the vehicle is left unattended. If the vehicle is left with a parking attendant, only the ignition key is to be left.
- F. Headlights shall be used one half hour before sunset, one half hour after sunrise, or during inclement weather or at any time when a distance of 500 feet ahead of the vehicle cannot be seen clearly.
- G. All vehicles contain an accident packet. The accident packet typically includes accident reporting procedures, witness information, a drug and alcohol testing form, and testing locations.
- H. All other state laws, local laws, or DOT motor carrier safety regulations must be obeyed.

Defensive Driving Rules

- A. Drivers are required to maintain a safe following distance at all times.
- B. Drivers of passenger vehicles should keep a two-second interval between their vehicle and the vehicle immediately ahead. During slippery road conditions, the following distance should be increased to at least four seconds.
- C. Drivers of heavy trucks should keep a minimum of a three-second interval when not carrying cargo, and at least four seconds when fully loaded. Following distance should also be increased when adverse conditions exist.

- D. Drivers must yield the right of way at all traffic control signals and signs requiring them to do so. Drivers should also be prepared to yield for safety's sake at any time. Pedestrians and bicycles in the roadway always have the right of way.
- E. Avoid driving in other drivers' blind spots; attempt to maintain eye contact with other drivers, either directly or through mirrors.
- F. Drivers must honor posted speed limits. In adverse driving conditions, reduce speed to a safe operating speed that is consistent with the conditions of the road, weather, lighting, and volume of traffic. Tires can hydroplane on wet pavement at speeds as low as 40 miles per hour (MPH).
- G. Turn signals must be used to show where you are heading while entering into traffic, before every turn, or to signal a lane change.
- H. When passing or changing lanes, signal to alert other drivers of your intent. Use your mirrors to view your adjacent and rear surroundings. When you have determined you have ample room to safely merge into the lane, accelerate or decelerate to do so. Set up mirrors using the blind spot and glare luminated mirror setting method.
- I. Always Park in a ready to go manor.
- J. Be aware of other vehicles, pedestrians, and bicyclists when approaching intersections. Never speed through an intersection on a yellow caution light. Approach a stale green light with your foot poised over the brake to reduce the reaction time necessary to stop. When the traffic light turns green, look both ways for oncoming traffic before proceeding.
- K. When waiting to make left turns, keep your wheels facing straight ahead. If rear-ended, you will not be pushed into the lane of oncoming traffic.
- L. When stopping behind another vehicle, leave enough space so you can see the rear wheels of the car in front. This allows room to go around the vehicle if necessary and may prevent you from being pushed into the car in front of you if you are rear-ended.
- M. Avoid backing, but, when necessary, keep the distance traveled to a minimum and be careful.
 - i. Check behind your vehicle. Operators of heavy trucks should walk around their vehicle before backing and/or have someone guide you.
 - ii. Back to the driver's side. Do not back around corners or into areas of no visibility.

4. Cell Phone

- N. Using a cell phone while driving presents a hazard to the driver, other employees, and the general public. Even hands-free is not risk-free. This policy, designed to limit distractions while driving, applies to wireless phones, tablets, computers, and other electronic devices.
- O. Employees must adhere to all federal, state, or local rules and regulations regarding the use of cell phones while driving. Employees shall not use cell phones if law, regulation, or other ordinance prohibits such conduct. If you are not sure whether the use of a cell phone while driving is prohibited in a particular area, please check with the human resource department or do not use the cell phone when driving.
- P. Employees shall not use handheld cell phones while driving. Should an employee need to make a business call while operating a vehicle, he/she should locate a lawfully designated area to park and make the call.
- Q. Employees may use hands-free cell phones to make and receive business calls. Such calls should be kept short and should the circumstances warrant (e.g., heavy traffic, inclement weather), the employee should locate a lawfully designated area to park and continue the call.

G. What to Do In Case of an Accident

- A. In an attempt to minimize the results of an accident, the driver must prevent further damage or injuries, obtain all pertinent information, and report it accurately.
- B. Call for medical aid if necessary.
- C. Secure the accident scene: pull onto the shoulder or side of road, redirect traffic, set up road flares/reflectors, etc.
- D. Call the police. All accidents, regardless of severity, must be reported to the police.
- E. Record names and addresses of driver, witnesses, occupants of the other vehicles, and any medical personnel who may arrive at the scene.
- F. Complete the form located in the accident packet located in your vehicle. Pertinent information to obtain includes:
 1. License number of other drivers
 2. Insurance company names and policy numbers of other vehicles
 3. Make, year, and model of other vehicles
 4. Date and time of accident
 5. Overall road and weather conditions
- G. Draw a diagram of the accident scene, and note the street names and locations of traffic signs, signals, etc. Take pictures of the scene, vehicle damage, road conditions, etc. Take up-close and full-frame pictures to document the scene.
 - H. Do not discuss the accident with anyone at the scene except the police. *Do not* accept any responsibility for the accident. *Don't* argue with anyone.
 - I. Provide the other party with your name, address, phone number, driver's license number, and insurance information.
- J. Immediately report the accident to Coffman Safety Director. Provide a copy of the accident record and/or your written description of the accident to Coffman Safety Director as soon as possible.
- K. Cooperate fully with any follow-up from insurance personnel.

H. Vehicle Maintenance

- A. Proper vehicle maintenance is a basic element of any fleet safety program, not only to ensure a safe, road worthy vehicle, but also to avoid costly repair expenses and unexpected breakdowns.
- B. Registration and inspection is the responsibility of the assigned driver.
 - i. Drivers of DOT regulated vehicles are required to inspect their vehicle prior to usage, documenting and notifying the company mechanic of deficiencies found.
 - ii. In addition to inspections required by law for passenger vehicles, routine inspections of critical items, such as brakes, lights, tires, wipers, etc., must also be completed by drivers of passenger vehicles.
- C. The vehicle should be cleaned (interior and exterior) regularly to help maintain its appearance for you and the company. A clean vehicle makes a good impression on customers.
- D. The vehicle manufacturer's maintenance schedule should be referenced and closely followed regarding recommended maintenance intervals.

Vehicle Maintenance Requirements

- A. Discuss responsibilities for maintenance.
 - 1. Coffman Fleet manager is responsible for scheduling repairs.
 - 2. Prior approval required from Coffman Fleet manager
 - 3. Coffman fleet manager is responsible for authorizing repairs and expenses quoted by a repair facility.
- B. Discuss any specific preventative maintenance requirements (i.e. oil changes every 5,000 miles, engine tune-up every 20,000 miles, winterizing requirements, windshield wipers are replaced at least annually, etc.).
- C. Discuss type, care, and replacement of tires: specify type required, including snow tires, rotation and replacement schedule, and where to obtain new tires.
 - 1. Note any specific type/grade of gasoline required.
 - 2. Discuss any reporting or tracking of mileage required.
 - 3. Discuss reporting requirements and/or records, the driver must maintain for maintenance and repairs performed on the vehicle assigned to them.
- 4. Discuss expense reporting and reimbursement for gasoline and maintenance.
 - 5. Discuss any personal use charges that may apply.
 - 6. Vehicles must have:
 - 7. Fire Extinguishers
 - 8. SDS

Acknowledgements

I acknowledge that the information contained in the company’s Vehicle Fleet Safety Policy has been reviewed with me and a copy of the policy and driver rules have been furnished to me. As a driver of a company vehicle, I understand that it is my responsibility to operate the vehicle in a safe manner and to drive defensively to prevent injuries and property damage.

Employee Name (print)

Employee Signature Date

Reviewer’s Signature Date

Sign and retain the original copy in the employee’s file.

CHAPTER 4.24 Electrical Safety

A. Electrical Cords

- a. Repairs and Usage – Almost every construction operation uses extension cords and power tools within their shops and operations. There are some OSHA 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 OSHA and/or OR-OSHA requirements.
- b. Electrical Cord Usage – The following are highlights of the more common requirements for extension and power tool cords.
 - i. 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.
 - ii. 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).
 - iii. 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.
 - iv. 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.

2. Electrical Cord Repair

- a. 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.
 - i. 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 with shrink tubing or insulating tape the same thickness as the cord jacket.
 - ii. **Note:** *Cords less than 12 gauges may not be allowed to be repaired. It may be necessary to review OSHA and OR-OSHA interpretations.*
 - iii. Replacement electrical cord ends are required to be grounded, three conductor type with a strain-relief connector (see picture 1). 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.
 - iv. 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.

v. (Picture 1)



3. Ground Fault Protection/Assured Equipment Grounding

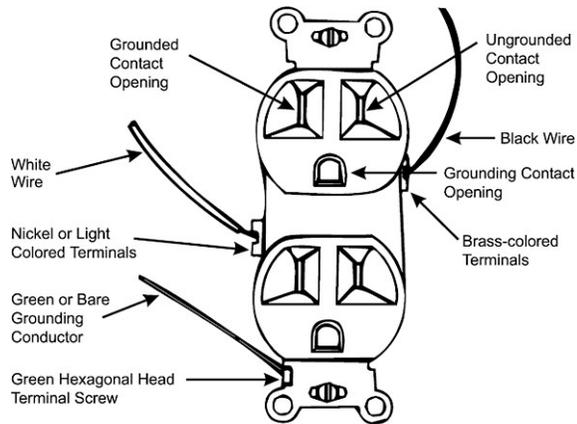
- a. Scope – The purpose of this procedure is to establish a standardized program for ground fault protection on all construction sites and to protect employees from the electrical hazards associated with 120-volt AC current. This program applies to all company and employee-owned cord sets, receptacles, 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)*
 - b. 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.
 - c. 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.
 - i. 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.
 - ii. *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.*
 - iii. 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:
4. **This written description shall be made available at the site.**
 5. **One or more competent persons will be designated to implement the program.**

- 6. 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.**

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.

- 7. Extension cords and equipment will be tested by a competent worker as follows:**
 - a. Receptacle Tester – Utilize to show terminals are correctly connected to ground and wire is continuous, with no breaks. See Diagram 1, Picture 2, and Diagram 2.

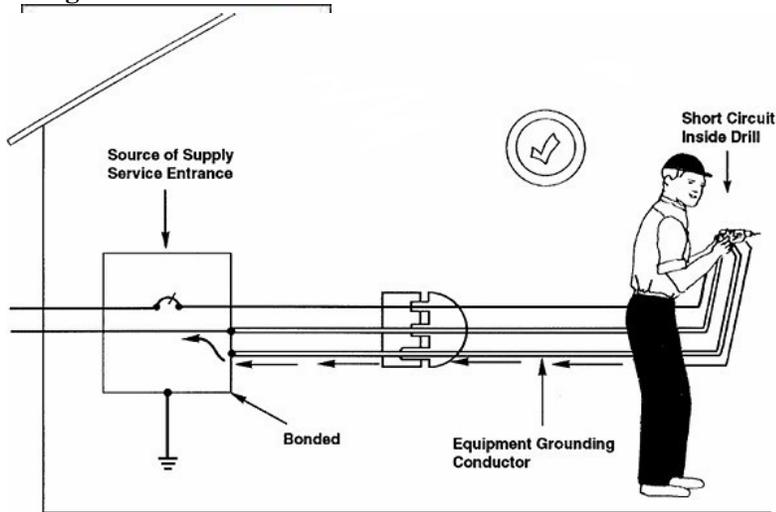
Diagram 1



Picture 2



Diagram 2



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

Picture 3



Diagram 4

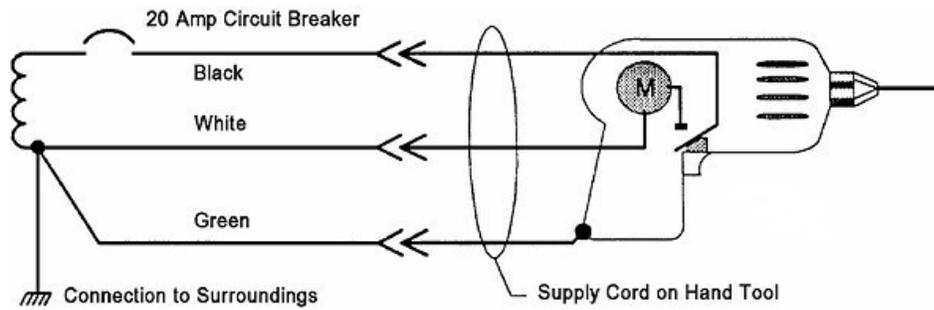
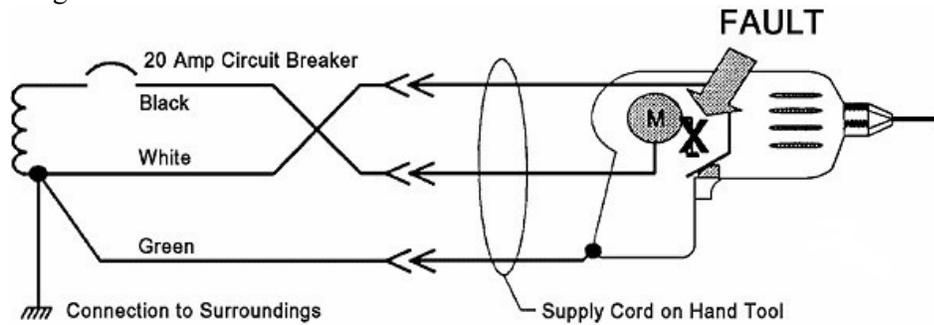


Diagram 4



- i. Testing frequency:
- Before initial use
 - After any repair work
 - When damage is suspected
 - Every three months

8. Test records:

The following color coding utilizing appropriate colored electrical tape will be placed on all cord sets:

Jan. to March 31 – White April to June 30 – Green July to Sept. 30 – Red Oct. to Dec. 31 –

Orange Repair – Brown

Note: Be sure old tape is removed before new quarter of coding is applied.

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

See Table 1.

Table 1

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

10. **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 rounding documentation log may be used when required by site contractors.

11. Additional Requirements

- a. 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.

12. Portable Powered Hand Tools

- a. Tools shall be inspected prior to use. Refer to manufacturer’s recommendations for inspection guidelines.
- b. Power cords shall not be used for hoisting or lowering tools.
- c. Inspect the power cord; the tool must have a three-prong rounding cord or double insulated case.
- d. Avoid working with powered tools in wet conditions. Assure cords are not lying in water.
- e. 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.

13. Materials Needed

- Complete kit
- GFCI tester
- Adapter for twist lock
- Coding tape and poster
- Continuity tester

CHAPTER 4.25 Heat & Cold Stress Program

Introduction

The goals of this program are to provide a safe and healthful working environment and protect Coffman excavation employees who perform work in an outdoor environment.

Coffman excavation will evaluate and reduce hazards if employees are exposed to temperature extremes, radiant heat, humidity, or limited air movement while working in an outdoor environment.

It is the policy of Coffman excavation that all affected employees are required to comply with this policy and are encouraged to identify ways to reduce the risk of experiencing heat and cold stress in the workplace.

It is also the policy of Coffman excavation to check the workplace for unsafe conditions, monitor the health and safety of employees, and take prompt action in response to any identified heat-related illness hazards.

Employees at Risk

We do not anticipate employees routinely being exposed to heat and cold stress hazards in the Northwest. However, there are tasks and procedures that may cause employees to experience stress from hot or cold environments.

Hazard Evaluation

If you are performing a task where you may have stress from the environment, please contact your safety professional or EHS manager Scott Brawner. Indoor activities also may be included in certain circumstances.

Job Type	Hazard
(ex) Daytime, outdoor paving (July, August, September)	Heat stress

These jobs and tasks will be maintained on file by the Human Resources department.

When heat-related illness hazards are present, some (or all) of the following actions will be taken:

- Additional rest breaks will be provided during peak temperature times
- Water will be provided and made readily accessible in sufficient quantity to provide one quart per employee per hour.
- 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.
- 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.
- 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.
- Shaded areas will be available for breaks.
- Employees working in remote locations will be contacted periodically.

4.0 Training

Training will be conducted prior to employees working in conditions or before any anticipated exposure to heat or cold stress is anticipated.

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.

- **Employee Training**

Training in the following topics will be provided to all employees who may be exposed to a heat-related illness hazard:

- Environmental factors that contribute to the risk of heat-related illness
- Awareness of personal factors that may increase susceptibility to heat illness
- [Insert company name]’s procedures for identifying, evaluating, and controlling exposure
- The importance of removing personal protective equipment during all breaks
- 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
- The importance of acclimatization
- The different types of heat-related illness and the common signs and symptoms of heat-related illness
- The importance of immediately reporting to [Insert company name], directly or through the employee’s supervisor, symptoms or signs of heat illness in themselves or in coworkers
- [Insert company name]’s procedures for responding to symptoms of possible heat-related illness, including how emergency medical services will be provided should they become necessary
- The purpose and requirements of this standard
- The worker’s right to receive the protection provided by this standard

- **Supervisor Training**

Prior to assignment, supervisors must have training on the following topics:

- The information required to be provided in employee training as described above
- The procedures the supervisor is to follow to implement the applicable provisions in this section
- The procedures the supervisor follows when an employee exhibits signs or symptoms consistent with possible heat-related illness, including emergency response procedures
- Procedures for moving employees to a place where they can be reached by an emergency medical service provider, if necessary
- How to provide clear and precise directions to the emergency medical provider who needs to find the work site

5.0 Heat Stress Awareness

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.

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.

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.

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 Coffman job trailers

	Signs and Symptoms	First Aid and Treatment
Sunburn	<ul style="list-style-type: none"> • Red, hot skin • May blister 	<ul style="list-style-type: none"> • Move to shade, loosen clothing • Apply cool compresses or water
Heat Rash	<ul style="list-style-type: none"> • Red, itchy skin • Bumpy skin • Skin infection 	<ul style="list-style-type: none"> • Apply cool water or compresses • Keep affected area dry • Control itching and infection with prescribed medication
Heat Cramps	<ul style="list-style-type: none"> • Muscle spasms in legs or abdomen • Grasping the affected area • Abnormal body position 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Headaches • Clumsiness • Dizziness, lightheadedness, fainting • Weakness, exhaustion, fatigue • Heavy sweating; clammy, moist skin • Irritability, confusion • Nausea, vomiting • Paleness • High pulse rate 	<ul style="list-style-type: none"> • 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 • Evaluate mental status (ask who, where, when questions) • Call 911 if not feeling better within a few minutes
Heat Stroke	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

6.0 Cold Stress Awareness

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. Frostnip and frostbite are freezing injuries.

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:

- They lose heat more rapidly since they have a higher surface area-to-volume ratio, and
- They are more likely to be in contact with cold surfaces than other parts of the body.

If the eyes are not protected with goggles in high wind chill conditions, the corneas of the eyes may freeze.

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.

Frostnip 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).

Frostnip can be prevented by wearing warm clothing and footwear. It is treated by gentle rewarming (e.g., holding the affected tissue next to the 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.

Frostbite 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.

Table 1

Stage	Core Temperature	Signs and Symptoms
Mild Hypothermia	37.2–36.1°C (99–97°F)	Normal shivering may begin
	36.1–35°C (97–95°F)	Cold sensation, goose bumps, unable to perform complex tasks with hands, shivering can be mild to severe, hands numb
Moderate Hypothermia	35–33.9°C (95–93°F)	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.
	33.9–32.2°C (93–90°F)	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	32.2–30°C (90–86°F)	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
	30–27.8°C (86–82°F)	Muscle rigidity, semiconscious, stupor, loss of awareness of others, pulse and respiration rate decrease, possible heart fibrillation
	27.8–25.6°C (82–78°F)	Unconscious, heartbeat and respiration erratic, a pulse may not be obvious
	25.6–23.9°C (78–75°F)	Pulmonary edema, cardiac and respiratory failure. Death may occur before this temperature is reached.

Hypothermia is a medical emergency. At the first sign, find medical help immediately. The survival of the victim depends on their co-workers' ability to recognize the symptoms of hypothermia. The victim is generally not able to notice his or her own condition.

First aid for hypothermia includes the following steps:

- Seek medical help immediately. Hypothermia is a medical emergency.
- Ensure that wet clothing is removed
- 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.
- Give warm, sweet (caffeine-free, nonalcoholic) drinks unless the victim is rapidly losing consciousness, unconscious, or convulsing.
- Quickly transport the victim to an emergency medical facility.

- Do not attempt to rewarm the victim on a site (e.g., do not use hot water bottles or electric blankets).
- 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.

CHAPTER 4.26 RESPIRATORY PROTECTION PROGRAM

Definitions

APF: (assigned protection factor). The level of respiratory protection that a particular type of respirator is expected to provide, assuming it's used via an effectively implemented respirator program.

APR: air-purifying respirator. Rely on filtration to remove airborne contaminants. Fit factor. A quantitative estimate of the fit of a particular respirator to a specific individual. For example, a fit factor of 100 means the concentration of an airborne contaminant is expected to be 100 times less inside the respirator face piece compared to the outside.

IDLH: Immediately Dangerous to Life or Health

MUC: Maximum use concentration.

NIOSH: National Institute of Occupational Safety and Health

PAPR: powered air-purifying respirator.

PEL: Permissible Exposure Level

PLHCP: Physician or other licensed health care professional. Someone authorized to conduct the medical evaluation of employees required to wear a respirator.

Program Overview

Coffman Excavation has determined that employees working in certain environments and/or conducting certain tasks are exposed to respiratory hazards during routine operations, as summarized in Appendix A (**Voluntary and Required Respirator Use**). Appendix A also identifies when emergency use of respirators may be warranted, and where voluntary use of respirators is authorized. Appendix B (**Employees Wearing Respirators**) individually identifies those employees required to use respiratory protection or allowed to wear respirators on a voluntary basis. Workers participating in the respiratory protection program do so at no cost to themselves.

Engineering controls, such as ventilation and substitution with less toxic materials, are always the best means of reducing employee airborne exposures to hazardous chemicals. Such controls were considered for each of these operations and found to be not feasible, or did not reduce exposures low enough.

Coffman Excavation has developed this Respiratory Protection Program, which is implemented and maintained as an important component of our Injury and Illness Prevention Program, to enhance our employees' health and safety. The Respiratory Protection Program Administrator (Administrator) has full authority and responsibility for implementing and maintaining this program.

Coffman's Respiratory Protection Program Administrator:
Scott Brawner- email: sbrawner@coffmanteam.com. -Cell: 503-449-7046

Employees that wish to wear respirators during certain operations that do not require use of respiratory protection: Coffman will provide respirators for voluntary use if the use of respiratory protection in a specific case will not jeopardize the health or safety of the employee. Any employee who voluntarily wears a respirator, (other than a disposable filtering face piece Respiratory Protection Program Rev. 01/2025 respirator/dust mask) when a respirator is not required will be identified in Appendix B and is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with, and understand, the information provided in Appendix D (**Information for Employees Using Respirators**)

When Not Required To). Employees voluntarily wearing only a filtering face piece respirator/dust mask are not subject to these requirements, but are still required to be provided with, and understand, the information provided in Appendix D.

The instructions provided by the manufacturers of the respirators our employees use will be incorporated as part of our written program. Employee training will include references to these instructions, as appropriate.

A. Responsibilities

1. Administrator -Duties of the administrator include the following
 - a. Identify work areas, processes or tasks that require workers to wear respirators.
 - b. Develop procedures for selecting proper respirators, including the correct filters/cartridges for air purifying respirators (APR).
 - c. Ensure effective administration of the medical surveillance program. • Develop procedures for proper fit testing of tight-fitting respirators.
 - d. Develop procedures for proper use of respirators in routine and reasonably foreseeable emergencies.
 - e. Develop procedures and schedules for cleaning, storing, inspecting, repairing, discarding, and maintaining respirators.
 - f. Ensure effective respirator user training on the respiratory hazards to which they are potentially exposed, and the proper use of respirators.
 - g. Ensure employees voluntarily using respirators are provided with and understand the information provided in Appendix D.
 - h. Determine suitable, objectively determined respirator cartridge change out schedules that the users must abide by.
 - i. Determine the user seal check procedure that employees will be required to implement every time they don a respirator.
 - j. Determine the respirator cleaning procedures that employees will be required to implement.
 - k. Determine the respirator inspection procedures that employees will be required to implement.
 - l. Ensure maintenance of all records required by this program.
 - m. Develop procedures for regularly evaluating the effectiveness of this program.
2. Supervisors -Duties of the supervisors include ensuring
 - a. Employees under their supervision (including new hires) receive appropriate training, fit testing, and medical evaluations, as required.
 - b. Availability of appropriate respirators and accessories.
 - c. Awareness of tasks requiring the use of respiratory protection and enforcement of the proper use of respiratory protection.
 - d. Respirators are properly cleaned, maintained, inspected, and stored.
 - e. Respirators fit well and do not cause discomfort. Respiratory Protection Program Rev. 01/2025
 - f. Additional fit testing is conducted if an employee indicates a respirator does not seem to fit any more or it is found to be unacceptable.
 - g. Continual monitoring of work areas and operations to identify respiratory hazards.
 - h. Coordination with the Administrator on how to address respiratory hazards or other concerns regarding the program.

- i. Employees change respirator cartridges according to the prescribed change-out schedules.
3. Employees -Duties of employees include the following
 - a. Wear their respirators when and where required and in the manner in which they were trained.
 - b. Care for and maintain their respirators as instructed, and store them in a clean, sanitary location.
 - c. Change their respirator cartridges out according to the prescribed change-out schedules.
 - d. Inform their supervisor if the respirator no longer fits well or is found to be unacceptable
 - e. Inform their supervisor or the Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.
 - f. Inform their supervisor of the need for a medical reevaluation.

B. Respirator Selection Procedures.

1. A hazard evaluation will be conducted for each operation, process, or work area whenever it is reasonable to suspect that employees may be exposed to concentrations of airborne contaminants above Permissible Exposure Limits (PEL).
2. Ensuring it incorporates our Hazard Communication Program, including the identification and development of a list of hazardous chemicals used in the workplace, by department or work process, and obtaining a Safety Data Sheet for each of these chemicals.
3. Reviewing work processes to determine where potential exposures to these hazardous chemicals may occur.
4. Employee exposure monitoring and evaluation of objective information to estimate potential hazardous exposures. Outside expertise, such as our worker's compensation insurance carrier or a private consultant, will be used, as needed. This information will also be used as needed to determine APR cartridge change-out schedules.
5. Respirators to be used are selected based on the hazards to which workers are exposed, as well as workplace and employee user factors affecting respirator performance and reliability. • Respirators are selected based on the Assigned Protection Factors (APFs) and calculated Maximum Use Concentration (MUC). For instance, if the respirator selected has an APF of 10, it can only be used where employee exposures are less than 10 times the PEL.
6. A sufficient number of respirator sizes and models will be provided to the employees during fit testing to identify the respirators that correctly fit, and are acceptable to, the users.
7. Only National Institute of Occupational Safety and Health (NIOSH)-certified respirators are to be selected and must be used in compliance with their certification.
8. For non-IDLH atmospheres, respirators are to be:
 - o Selected as appropriate for the chemical nature and physical form of the contaminant and adequate to protect the health of the employee under routine and reasonably foreseeable emergency situations.
 - a. Coffman employees will only use air purifying respirators in non-IDLH atmospheres

9. Equipped with end-of-service-life indicators (ESLIs) if the APR respirators are used for protection against gases and vapors. The respirator cartridge change-out schedule provided below under Storage, Cleaning, Maintenance and Filter Change-Out Procedures and Schedules must be implemented if there is no ESLI.
10. Equipped with NIOSH certified Appendix C (Employee Airborne Hazardous Chemical Assessments), attached to this program, contains the latest employee airborne chemical exposure data on which our current respirator selection is based. Additional employee exposure determinations will be made, and Appendix C updated accordingly, any time there are changes made to how materials are used or processed that could significantly change employee exposure levels.

C. Medical Evaluation

1. Employees are not permitted to wear respirators (except for voluntary use of a filtering face piece/dust mask) until a physician or other licensed healthcare professional (PLHCP) has determined that they are medically able to do so.
2. The medical questionnaire and examinations will be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. Coffman will provide multiple PLHCP's that will provide the medical evaluations complete list provided in Appendix I
 3. This evaluation will be conducted using the questionnaire provided in Appendix J.
 4. The Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
 5. To the extent feasible, we will assist employees who are unable to read the questionnaire. If this is not feasible, the employee will be sent directly to the PHLCP for medical evaluation.
6. All affected employees will also be given a stamped and addressed envelope for mailing the questionnaire directly to PHLCP. Employee requirements as follows.
 - a. Permitted to fill out the questionnaire on company time.
 - b. Granted follow-up medical exams as required by the Respiratory Protection standard, and/or as deemed necessary by the PLHCP.
 - c. Granted the opportunity to speak with the PLHCP about their medical evaluation, if they so request.
7. The Program Administrator will provide the PLHCP

- a. A copy of this program and a copy of the state/federal OSHA program Respiratory Protection standard.
 - b. Each employee's assigned job title and work area, and the list of hazardous substances that they may be exposed to.
 - c. The employees: Respiratory Protection Program Rev. 01/2025
 - d. Proposed respirator type and weight.
 - i. Length of time required to wear the respirator.
 - ii. Expected physical workload (light, moderate, or heavy).
 - e. Potential temperature and humidity extremes.
 - f. Any additional protective clothing required.
 - g. If the respirator is negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, we will provide a PAPR if the PLHCP's medical evaluation finds that the employee can use such a respirator. After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided if:
 - h. The employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pain, or wheezing.
 - i. The PLHCP or supervisor informs the Administrator that the employee needs to be reevaluated.
 - j. Information from this program, including observations made during fit testing and program evaluation, indicates a need for re-evaluation.
 - k. A change in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.
- D. Fit Testing
1. All employees required to wear tight-fitting face-piece respirators must pass a fit-test: Prior to initial use.
 2. Whenever a different respirator face piece (size, style, make, and model) is used. At least annually.
 3. Additional fit-testing is required when the employee:
 4. Reports, or the PLHCP supervisor, or Administrator observes changes in the employee's physical condition that could affect respirator fit.
 5. Notifies us or our PLHCP that the fit of the respirator is unacceptable and wishes to select a different respirator face piece.
 6. Employee fit-testing will be conducted according to the protocols provided in Fit Testing Procedures.
 7. See Site Specific Safety Plans describing QLFT/QNFT procedures utilized.
 8. Employees will be fit-tested to the same make, model, style, and size of respirators that they actually wear.
 9. Fit testing of tight-fitting face piece PAPRs and supplied air respirators is to be conducted only in the negative pressure mode.
 10. The maximum APF of any negative pressure, tight fitting air-purifying respirator (except quarter-face and PAPRs) fit tested by QLFT will be 10. For instance, even though a full-face APR respirator has an APF of 50, the only way we can assume that APF is if we verify proper fit using a QNFT protocol.

E. Procedures for Proper Respirator - Use All filters, cartridges, and canisters must be labeled with the appropriate NIOSH certification label. The label must not be removed or defaced while it is in use. Respiratory Protection Program Rev. 01/2025

1. Employee Requirements

- a. Use them under the conditions specified by this program, and in accord with the training they receive on the use of each particular model. The respirator must not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- b. Conduct user seal checks according to Appendix F each time that they don their respirator.
- c. Not wear tight-fitting respirators if they have facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function, or any condition that interferes with the face-to-face piece seal or valve function. This includes the use of headphones, jewelry, prescription eye ware or personal protective equipment (PPE). Equally important, the wearing of a respirator must not hinder the effectiveness of PPE that is worn, something that will be accommodated through the selection of different styles of PPE and respirators.
- d. Leave the respirator use area: ○ To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use.
- e. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece.
- f. To replace the respirator or the filter, cartridge, or canister elements.

2. Supervisors' Requirements

- a. Take action to ensure that employees implement all of the above requirements. • Ensure that a respirator is replaced or repaired should an employee detect vapor or gas breakthrough, change in breathing resistance, or leakage of the facepiece, and before allowing them to return to the work area
- b. Ensure adequate surveillance of work area conditions and degree of employee exposure or stress.
- c. Involve the Administrator when there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, so that continued effectiveness of the respirator can be evaluated.

F. Respirator Malfunction (Non-IDLH)- For any malfunction of an APR, the respirator wearer must inform their supervisor that the respirator no longer functions and go to the designated area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator or is provided with a new respirator.

G. Storage, Cleaning, Maintenance and Filter/Cartridge Change-Out Procedures.

1. See Site Specific Safety Plans describing cleaning locations for respirators
2. Respirators issued for the exclusive use of an employee are to be cleaned and disinfected as often as necessary to maintain sanitary conditions.
3. Respirators issued to more than one employee will be cleaned and disinfected before being worn by different individuals.

4. The cleaning instructions in Appendix G must be implemented. The Administrator will ensure an adequate supply of appropriate cleaning and disinfection Respiratory Protection Program Rev. 01/2025 material at the cleaning station. If supplies are low, employees should contact their supervisor or the Administrator.

H. Maintenance

1. Respirators are to be properly maintained to ensure that they function properly and adequately protect the employees.
2. Maintenance involves a thorough visual inspection (Appendix H) for cleanliness and defects.
3. Worn or deteriorated parts will be replaced prior to use.
4. No components will be replaced or repairs made beyond those recommended by the manufacturer.
5. Employees are encouraged to leave their work area and go to a designated area that is free of respiratory hazards when they need to wash their face and respirator face piece (using Appendix G procedures) to prevent any eye or skin irritation, or to replace the filter, cartridge or canister, or when they detect vapor or gas breakthrough or leakage in the face piece, or detect any other damage to the respirator or its components.
6. The inspection procedures in Appendix H must be implemented.

I. Cartridge Change-Out Schedules

1. Employees wearing APRs for protection against airborne particulates need to change the filters on their respirators when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks.

J. Employees wearing PAPRs against airborne particulates must follow the manufacturer's recommendations for when to change out the filters.

1. Starts as soon as the cartridges are unsealed, not when the employees start to use them.

K. Storage

1. Respirators must be stored in a clean, dry area, and in accord with the manufacturer's recommendations.
2. See Site Specific Safety Plans for storage and supply procedures

L. Defective Respirators

1. Respirators that are defective or have defective parts must be immediately tagged and taken out of service.
2. As soon as an employee discovers a defect in a respirator, they must bring the defect to the attention of their supervisor.
3. Supervisors will tag and give all defective respirators to the Administrator.
4. The Administrator will decide
 - a. Temporarily take the respirator out of service until it can be repaired. ○ Perform a simple fix on the spot such as replacing a head strap.

- b. Dispose of the respirator due to an irreparable problem or defect. • Employees will be provided with a replacement respirator that they have been fit-tested for before returning to work.

M. Air Quality- Refer to Coffman`s Wildfire Smoke Policy. Respiratory Protection Program (Chapter 11 of Coffman`s EHS Program)

N. Training

1. Division Safety Managers will provide training to respirator users and their supervisors on the contents of this Respiratory Protection Program and their responsibilities under it.
2. Workers will be trained prior to using a respirator in the workplace.
3. The training will be comprehensive, understandable and recurred annually, and more often if necessary.
4. Supervisors must also be similarly trained prior to supervising workers who must wear respirators even though supervisors themselves do not use a respirator.
5. Each employee can demonstrate knowledge of at least the following:
 - a. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
 - b. What are the limitations and capabilities of the respirator are.
 - c. How to use the respirator effectively in emergencies, including situations in which the respirator malfunctions.
 - d. How to inspect, put on and remove, use, and check the seals of the respirator.
 - e. What the procedures are for maintenance and storage of the respirator.
 - f. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
6. The general requirements of the Respiratory Protection standard.
7. The Administrator, Division Safety Managers and supervisors will ensure that employees are retrained at least annually or as needed, such as when the following situations occur:
 8. Changes in the workplace conditions or the types of respirators render previous training obsolete.
 9. Inadequacies in the employee`s knowledge or use of the respirator indicate that the worker has not retained the requisite understanding or skill.
 10. Any other situation arises in which retraining appears necessary to ensure safe respirator use.
 11. Voluntary Use (Appendix D) will be provided to all workers upon hire in writing.

O. Program Evaluation

1. The Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented.
2. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records.

3. Factors to be assessed include: ○ Respirator fit (including the ability to use the respirator without interfering with effective workplace performance).
4. Appropriate respirator selection for the hazards to which the employees are exposed.
5. Proper respirator use under the workplace conditions employee's encounter.
6. Proper respirator maintenance.
7. Problems identified will be noted and corrected by the Administrator and reported to the Safety Manager. The report will list plans to correct deficiencies in the respirator program and target dates for implementing those corrections.

P. Documentation and Recordkeeping

1. Respiratory Protection Program- Coffman Safety Department will ensure documents supporting our respirator program are maintained and made available to affected employees as follows:

- a. A written copy of this respirator program.
- b. The applicable state Respirator standard.
- c. Training materials.

2. Fit test records

- a. The name or identification of the employee tested
- b. Type of fit test performed
- c. Specific make, model, style, and size of respirator tested.
- d. Date of test.
- e. Test results (the pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs).
- f. Copies of all other records for all employees covered under the respirator program (except medical records).
- g. Sampling data • Employee's notification of sampling results
- h. The completed medical questionnaire and the PLHCP's documented findings are confidential and will remain with the PLHCP. We will only retain the physician's written recommendation regarding each employee's ability to wear a respirator.

*Employees can access the above information by contacting their EHS Manager. Should we use the services of a temporary employment service, we will treat their employees as if they are ours and include them in our Respiratory Protection Program, as appropriate

**Employees are to contact the Administrator if they have questions about this plan or wishes to review it. Our plan will be maintained by the Administrator to ensure that the policies are carried out and the plan is effective.

Appendix A

Voluntary and Required Respirator Use

Task	Airborne Hazardous Materials of Concern	Required Respirator or APF	Type of Respiratory Protection (e.g., half- or full-face, APR or SAR, filtering facepiece)	Indicate if "mandatory", "voluntary", or "emergency" use
Silica below 25ug	silica <10µ	10	Half face	voluntary
Silica above 50ug	silica <10µ	10	Half face	mandatory
Wildfire smoke (PM2.5)	PM <2.5µ	10	Half face	voluntary
Lead Demo	Lead	50	Full face	mandatory
Lead Drywall	Lead	10	Half face	mandatory
Silica per Table 1	silica <10µ	various	various	mandatory
Mold remediation <10 ft ²	Mold spores	10	Half face	voluntary
Mold remediation <100 ft ²	Mold spores	10	Half face	mandatory
Mold remediation >100 ft ²	Mold spores	10	Half face	mandatory
Mold remediation (non Demo) any size	Mold spores	10	Half face	mandatory

Appendix B

Not applicable at this time

Appendix C

Employee Airborne Hazardous Chemical Assessments (Contact Coffman EHS Manager)

Appendix D

Information for Employees Using Respirators When Not Required Under the Standard

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

You should do the following:

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

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

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

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

Appendix E

Employee Respirator Training Roster (Maintained in the Coffman training matrix)

Training Topic Checklist

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
- What the limitations and capabilities of the respirator.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The general requirements of the Respiratory Protection standard.

Appendix F

User Seal Check Procedures Face piece Positive and/or Negative Pressure Checks.

Positive pressure check. Close off the exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the face piece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

Appendix G

Respirator Cleaning Procedures

Employees must implement the following respirator cleaning procedures:

- Remove filters, cartridges, or canisters. Disassemble face piece by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts

- Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt. Employees will be provided with detergents, cleaners, and brushes.
- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F).
 - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F).
 - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with clean lint-free cloth or air-dried.
- Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
- Test the respirator to ensure that all components work properly.

Appendix H

Respirator Inspection Procedures Employees will use the following checklist when inspecting respirators before each use and during cleaning:

Face piece

- Pliability
- Cracks, tears, or holes
- Face mask distortion
- Cracked or loose lenses/face shield
- Contamination of the interior

Valves:

- Residue or dirt
- Cracks or tears in valve material
- Valve distortions and proper seating

Head straps:

- Breaks or tears
- Loss of elasticity
- Functional buckles

Filters/Cartridges:

- Approval designation label

- Gaskets
- Cracks or dents in housing
- Proper cartridge for the hazard

CHAPTER 5

Coffman Excavation Non-Discrimination Policy, Harassment Policy, and Complaint Procedure

Coffman Excavation affirms and actively promotes the right of all individuals to equal opportunity in employment without regard to any protected basis including: race, color, sex, national origin, age, religion, marital status, disability, Family Medical Leave Act (FMLA), Oregon Family Leave Act (OFLA), veteran status, sexual orientation, gender identity, gender expression, ancestry, marital status, family relationship, pregnancy, work injury, or any other category protected by law (“Protected Status”). Coffman Excavation will not discriminate and will take “affirmative action” measures to ensure against discrimination in employment, recruitment, advertisements for employment, compensation, termination, upgrading, promotions, and other conditions of employment against any employee or job applicant on the basis of their Protected Status.

This policy has been established pursuant to the Civil Rights Act of 1964, Executive Order 11246 as amended, the Rehabilitation Act of 1973 as amended, the Vietnam Era Veterans Readjustment Assistance Act of 1974, and all other orders or regulations pertaining to Equal Employment Opportunity and to reaffirm our continued commitment to a program of equal employment and merit employment policies.

Harassment Policy

Coffman Excavation is committed to providing a respectful environment for all of its employees. Coffman Excavation prohibits harassment because of an employee’s Protected Status. Prohibited discrimination and discriminatory harassment, including any form of sexual harassment, will not be tolerated.

Harassment based on Protected Status can include, but not limited to:

- Showing pictures, objects, or written materials (including graffiti, cartoons, photographs, posters, calendars, magazines, etc.) that put down or show hostility to a person because of the person’s Protected Status.
- Making insulting comments, slurs, and jokes based on a person’s Protected Status.
- Asking unwelcome questions or making unwelcomed comments about another person’s Protected Status.

Sexual Harassment means any unwelcomed or unwanted sexual advances or requests for sexual favors or anysexual conduct when any of the following applies:

- If participating in the conduct is made a term or condition of employment (such as promotion, training, work, overtime assignment, or leave of absence);
- If participating in or refusing to participate in the conduct affects employment opportunities; or
- If the conduct interferes with an employee’s work or creates an intimidating, hostile, or offensive work environment.

Coffman Excavations will not tolerate any form of sexual harassment, regardless of whether it is:

- Verbal (for example, insulting statements, slurs, sexually related comments or jokes, unwelcomed sexual advances or requests for sexual favors);
- Physical (for example, touching or inappropriate physical conduct); or
- Visual (for example, putting up sexual posters, cartoons, or drawings, or making sexual gestures).

Sexual Harassment includes harassment based on another person's gender (male or female), gender identity (e.g., transgender, cross-dressing), sexual orientation (e.g., gay, other, lesbian), or harassment based upon pregnancy, Childbirth, or related medical conditions. Sexual Harassment also includes harassment of another employee who is the same gender as the harasser.

Employee Responsibilities

Coffman Excavation is committed to taking reasonable steps to prevent harassment and will take immediate and appropriate action when it knows that unlawful harassment has occurred. To do this, however, Coffman Excavation needs the cooperation of each and every one of its employees. All Coffman Excavation employees are responsible for keeping our workplace free from harassment and must use the following complaint procedure.

Complaint Procedure

Coffman Excavation encourages employees who don't like another employee's actions or statements to first tell that other employee, only if they are comfortable doing so. If the other employee does not stop, or if an employee is not comfortable in talking with the other employee, then the employee must promptly report the concern to their immediate supervisor. If that supervisor is unavailable or is the person whose actions that employee does not like, or if the employee feels it would be unproductive to do so, the employee must then immediately contact that supervisor's superior, President Aaron Hibbs (503/710-0946), Vice President Chad Rhea (503/710-0923) or EHS manager Scott Brawner (503)-449-7046

Coffman Excavation will promptly and carefully investigate all claims of harassment. Coffman Excavation will do its best to handle and investigate such complaints with sensitivity and confidentiality as the circumstances and the law allow. If Coffman Excavation finds that unlawful harassment occurred, it will take prompt and effective action. Any employee engaging in improper harassing behavior will be subject to disciplinary action, up to and including termination, based on the specific facts and circumstances as determined by, and at the sole discretion of, Coffman Excavation.

No Retaliation

Coffman Excavation will not retaliate against any employee who, in good faith, files a complaint of a violation of this policy, or against any employee who assists Coffman Excavation in the investigation of such complaint. This "No Retaliation" policy is violated if an employee is fired, denied a job, given negative performance feedback, or denied some other employment benefit because the employee complained about or assisted in the investigation of harassment. Employees are prohibited from using their authority or position to prevent or interfere with an employee reporting violation of the harassment policy. Employees found to have retaliated against another employee could be subject to discipline, up to and including termination, based on the specific facts and circumstances as determined by, and at the sole discretion of, Coffman Excavation.

Employees who believe they have been retaliated against for reporting harassment or participating in an investigation of harassment must promptly report it to their supervisor's supervisor, President Aaron Hibbs (503)710-0946, Vice President Chad Rhea (503)710-0923 or Scott Brawner EHS manager (503)449-7046, so that their concerns can be investigated.

Supervisors and managers who know of or receive reports or complaints of retaliation must promptly report them to their supervisor or to President Aaron Hibbs (503)710-0946, Vice President Chad Rhea (503)710-0923 or Scott Brawner EHS manager (503)449-7046.

Contact Information for reporting purposes

Complaints not submitted to their immediate supervisor must be submitted, either verbally or in writing, to the following individuals:

President: Aaron Hibbs

Mailing Address: 13014 Clackamas River Dr., Oregon City, OR 97045 Phone: 503-710-0916

Email: AHibbs@coffmanteam.com

Vice President: Chad Rhea

Mailing Address: 13014 Clackamas River Dr., Oregon City, OR 97045 Phone: 503-710-0923

Email: CRhea@coffmanteam.com

EHS manager: Scott Brawner

Mailing Address: 13014 Clackamas River Dr., Oregon City, OR 97045 Phone: 503-449-7046

Email: SBrawner@coffmanteam.com

CHAPTER 6 Drug and Alcohol Policy

The nature of the construction industry requires that all employees be in a condition to perform their jobs safely and efficiently, free from any impairment caused by alcohol or drugs. The AGC (Associated General Contractors), the GCCA (General & Concrete Contractors Association), Cement Masons, Laborers, Carpenters and Coffman Excavation are firmly committed to eliminating all of the problems associated with employee alcohol and drug abuse.

The Company is committed to maintaining a safe workplace and has instituted a “zero tolerance” program regarding use of illegal drugs and misuse of alcohol. All employees are hereby notified that the Company will comply with the requirements of the Drug-Free Workplace Act of 1988, and all applicable regulations issued hereunder, as well as, when applicable, any more stringent rules created by other federal or state agencies.

Coffman Excavation’s Drug and Alcohol Policy does not create an employment contract between the employer and employee. Furthermore, the Company has the sole right to modify the policy and program at any time.

Any employee who violates this company policy will be subject to disciplinary action up to and including termination from employment.

The Company also recognizes the need to avoid unnecessary intrusion into employees' private lives and to assure employee privacy and confidentiality to the greatest extent possible, consistent with the goals of this Policy. In addition, the Company acknowledges that some cases of substance abuse must also be dealt with as illnesses requiring medical treatment, not only as personnel problems. Lastly, the Company believes that the goals of this alcohol and drug policy should include education, prevention and rehabilitation. To achieve these objectives, all the Company employees must adhere to each of the following rules:

Prohibited Use Affecting Employment:

The use of alcohol or drugs by employees during working hours or on a job site or on company property (including company vehicles) is absolutely prohibited. Any employee who violates the Policy will be required to undergo an educational or rehabilitation program and/or may be subject to discipline under the terms of this Policy up to and including termination. The following definitions apply to this policy:

1. Use: The term "use" means consuming, possessing, selling, transferring, concealing, distributing or arranging to buy or sell, being under the influence, or reporting for duty under the influence of alcohol or drugs, or having illegal drugs in one's possession or system.
2. Alcohol or Drugs: The term "alcohol or drugs" means any form of alcohol and/or other intoxicating substance, narcotic plant or similar substance whether illegal or not, including legal drugs for which an employee has no prescription, or which have been obtained illegally.
3. Proper Medical Usage: Notwithstanding any other provision in this Policy, use of prescription and non-prescription medication is not a violation of this Policy if that medication is taken in accordance with a lawful prescription or standard medical dosage recommendation.

However, in the event an employee's treating physician has prescribed a medication which may impair job performance, the employee must discuss the impact such use may have on safety with his/her physician. If the employee's physician indicates that the medication may affect safe job performance, the employee must report the use of a medication to his/her immediate supervisor and the EHS manager before starting work. In such instance, it is within the sole discretion of the employee's immediate supervisor and the EHS manager to reassign the employee to an alternative position that is not safety-sensitive, if such a position is available.

Failure to discuss medications which may impair safe job performance (as indicated by the presence of a warning label regarding driving, operation of equipment, etc.) with one's physician or failure to report use of medications which may impair may lead to disciplinary action, up to and including termination of employment.

4. Medical/Recreational Marijuana: Marijuana is an illegal drug under federal law. This policy prohibits the use of marijuana, including "medical marijuana" and "recreational marijuana." The Medical Review Officer will review laboratory results which are positive for marijuana or its metabolites. In the absence of a valid prescription for Dronabinol, such results will be reported as positive tests, which will lead to rejection of a candidate's application for employment and to administrative action for employees, up to and including termination of employment. The claimed use of CBD (Cannabidiol) products shall not be considered an excuse for a positive marijuana test.
5. Covered Employees: This Policy applies to all employees of the Coffman Excavation. Employees who operate vehicles regulated by the Federal and State Departments of Transportation are also covered by Coffman Excavation's separate Drug and Alcohol Policy applicable to such employees.
6. Working Hours: The term "working hours" means all the time during which employees are engaged in work duties or subject to the control of Coffman Excavation and also includes scheduled breaks and travel to work or from one workplace to another.
7. Company Property: The term "company property" means all facilities, job sites, vehicles and equipment that are owned, leased, operated or utilized by Coffman Excavation or its employees for work-related purposes, including parking areas and driveways, as well as job site trailers, Conex boxes, lockers, toolboxes or other storage areas used by the employees. It also includes other public or private property,

facilities, vehicles and equipment located away from Coffman Excavation's facility if the employee is present on such property for a work-related purpose.

8. Private Property: An employee's private property may be inspected only for reasonable reasons and shall include employee's vehicle, lunch boxes, toolboxes, back packs, purses and the like that are brought by the employee onto Company property or used for work-related purposes.
9. Voluntary Events: Events attended voluntarily are not considered to be covered under this policy.
10. Evidential Breath Testing Device (EBT): An EBT is a breath testing device approved by the National Highway Traffic Safety Administration (NHTSA) for the evidential testing of breath and placed on NHTSA's "Conforming Products List of Evidential Breath Measurement Devices."
11. Medical Review Officer: The Medical Review Officer is the individual responsible for receiving laboratory results, who is a licensed physician with knowledge of substance abuse disorders and has the appropriate medical training to interpret and evaluate all positive test results together with an individual's medical history and any other relevant biomedical information.
12. Third-Party Administrator: Independent provider of drug/alcohol program services, including random selections.
13. Under the Influence: Having documented evidence of alcohol or drugs in one's system.
14. Refusal To Test: Refusal to provide a required specimen for testing, or other documented refusal to cooperate with the specimen collection or alcohol testing process, results in disciplinary action, up to and including termination of employment. Refusal to test includes submission of an invalid specimen without a medical explanation.

Enforcement Rules:

2. Testing: Any person shall be required to submit to drug or alcohol testing for any circumstance described below in Section 3.
3. First Positive Test Result or Refusal to Test: In the event of a first positive result or refusal to test, the test result or refusal will be one of the considerations in determining whether the employee will be terminated, or provided the opportunity for evaluation, counseling and treatment. If the Company does not choose to terminate the employee, the employee will be required to complete evaluation with Coffman Excavation's chosen evaluator and provide a negative test result prior to returning to work, providing an opening is available. The employee will also be required to sign a Return-to-Work Agreement (RTW) which may require follow-up urine specimens for testing, if indicated by the Company's evaluator.
4. Second Positive Test Result or Refusal to Test:
The conditions of paragraph (b) above will be applied. In addition, if Coffman Excavation does not elect to terminate the employee, the employee will be required to sign a Last Chance Agreement. The Last Chance Agreement will require the employee to provide follow-up urine specimens for testing as frequently as Coffman Excavation chooses.

5. Termination After Third Positive Result or Refusal to Test: If any employee has tested positive or refused to test for a third time, the employee will be promptly discharged and not eligible for future hire.
6. Invalidation of Card: When an employee has been terminated as a result of this policy, his/her verification card will become immediately invalid.
7. Return to Work During Counseling / Treatment: Coffman Excavation will determine whether an employee who has been referred for drug and alcohol counseling and/or treatment should be temporarily or permanently reassigned to another position for safety reasons. Any employee who tests positive for drugs or alcohol while undergoing drug and alcohol counseling or treatment may be promptly discharged.
8. Compensation during testing: Employees will be paid for their actual time expended during contract-required, post-incident, reasonable suspicion, and random testing.
9. Non-cooperation: Non-cooperation during any stage of this process will not be tolerated. In particular, refusal to take the test, sign the Lab's consent form, or tampering with the urine sample will result in prompt termination of employment. In particular, any urine sample that is outside the collection facility's acceptable temperature parameters or which is demonstrated by the laboratory to be inconsistent with normal human urine without a valid medical explanation will be considered a refusal to test. An invalid dilute result constitutes a positive test. Negative dilute results may require prompt recollection for pre-employment or reasonable suspicion tests.

Scope of Detection and Testing:

An employee shall submit to testing for alcohol or other intoxicating substances for the circumstances described below:

1. Pre-employment testing: All applicants for employment will be required to submit to drug testing under this policy after a conditional offer of employment has been made. A positive test, refusal to submit to testing, or tampering with a test is grounds for withdrawal of a conditional offer of employment.
2. Random Testing: All employees are subject to random testing. The random choice is through a random number generator under the management of a third-party administrator.
3. Reasonable Suspicion Testing: "Reasonable Suspicion" means aberrant or unusual behavior of a person which:
 - It is observed by a credible source, and which has been independently corroborated and documented.
 - Is the type of behavior which is a recognized and accepted symptom of intoxication or impairment caused by controlled substances or alcohol or addiction to or dependence upon said controlled substances.
 - Is not reasonably explained as resulting from causes other than the use of controlled substances (such as, but not by way of limitation, fatigue, lack of sleep, side effects of prescriptions or over-the-counter medication, reactions to noxious fumes or smoke, etc.).

***Supervisors should refer to Coffman Excavation's protocols on reasonable suspicion testing.

4. **Post Incident Testing:** Employees must notify their supervisors immediately of any injury or illness that occurs on the job. Employees must also notify their supervisors of any accident or “near-miss,” whether or not property damage or injury occurred. Involvement in an on-the-job accident or safety-related incident may lead to a requirement for drug testing. Management documents the circumstances of each accident/ incident individually. If the employee’s actions or inactions can be completely discounted as a contributing factor to the accident/incident, no testing is conducted. When there is a reasonable possibility that drug use may have contributed to the accident/incident, drug testing is conducted. A form is available to assist management in determining whether drug testing should be conducted after a particular accident/incident. When feasible, the specimen for post-accident drug testing is oral fluid; otherwise, it is urine. Testing uses a split specimen and is conducted at a certified laboratory. If there is evidence of alcohol misuse which may have contributed to the accident/incident, reasonable suspicion testing is conducted as soon as possible after the accident/ incident scene is secured and medical needs have been met. Employees responsible for, or contributing to, on-the-job injuries and accidents, whether or not medical treatment is necessary, or property is damaged, may be subject to a substance abuse screen.
5. **Contract-Required Testing:** Many of Coffman Excavation’s customers will not allow their subcontractors’ employees to enter their sites without current drug cards. Accordingly, when testing is required by Coffman Excavation’s contract, employees will be required to test.
6. **When Breath Testing May Be Performed:** In cases of reasonable suspicion of alcohol misuse, employees may be required to submit to alcohol testing with an EBT. In such instances, employees will also be required to provide a urine specimen for drug testing.
 - a. An employee will be considered to be using or under the influence of alcohol if his or her breath alcohol concentration is 0.02 or greater, determined by a confirmation test using an EBT. Such employees are subject to discipline up to and including termination.
7. **Follow-up Testing:** Employees who have tested positive and are subject to the conditions of a Rehabilitation Agreement or Last Chance Agreement are subject to follow-up testing during the term of the Agreement

Notice by Employees:

All employees must notify management of any criminal conviction for any drug-related offense occurring in the workplace, no later than five (5) days after such conviction.

Employee Self Help:

If an employee suspects that he/she has a substance abuse problem, the employee is expected to seek assistance for that problem. The employee should first check with his/her health insurance company, which may cover evaluation and/or treatment. Coffman Excavation will assist the employee in finding a competent resource for assistance upon request, whether through the employee’s insurance or self- paid.

Privacy:

Coffman Excavation shall take reasonable measures to safeguard the privacy of employees in connection with this Policy, including maintaining the confidentiality of employees who come forward to discuss alcohol.

1. Drug abuse affecting them before any testing or disciplinary action. Any person employed by Coffman Excavation who voluntarily seeks assistance or rehabilitation for alcohol or drug related problems before disciplinary action has commenced will not be subject to discipline so long as the person continues to participate satisfactorily in the education, rehabilitation or counseling program and continues to meet job standards and behave satisfactorily. Consistent with Law: Nothing in this

Policy is intended, nor shall it be construed, to authorize any action that is unlawful under federal or state law.

2. Company Protocols: Coffman Excavation has defined Protocols to be followed. These Protocols are not included in this document. A copy of Coffman Excavation's Protocols is available by written request. Occasionally, circumstances will arise which are not specifically covered by this policy. Company management will handle these situations in a way that is consistent with the goals and principles of the drug-free workplace program.

Acknowledgment of Receipt:

I have received and reviewed a copy of Coffman Excavation's Drug and Alcohol Policy and agree to abide by its terms.

Employee Signature:

Employee Name: _____

Date: _____

CHAPTER 7

Return to Work

Note: 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.

To preserve the ability to meet Coffman Excavation's needs under changing conditions, Coffman Excavation reserves the right to revoke, change, or supplement guidelines at any time with written notice. The policies and procedures in this return-to-work program are not intended to be contractual commitments and they shall not be construed as such by our employees. This policy is not intended as a guarantee of continuity of benefits or rights. No permanent employment for any term is intended or can be implied by this policy.

Objectives

Coffman Excavation has developed a return-to-work policy. Its purpose is 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 and will be followed whenever appropriate.

Coffman Excavation defines "transitional" work as temporary modified work assignments within the worker's physical abilities, knowledge, and skills.

Where feasible, transitional positions will be made available to injured employees in order to minimize or eliminate time loss.

For any business reason, at any time, we may elect to change the working shift of any employee based on the business needs of Coffman Excavation.

The physical requirements of transitional/temporary work will be provided to the attending physician. Transitional/temporary positions are then developed with consideration of the worker's physical abilities, the business needs of Coffman Excavation and the availability of transitional work.

In Case of an On-the-Job Accident

If you have a work-related injury and are missing time from work, contact our Human Resources or Personnel Department or SAIF Corporation for details regarding time loss.

Transitional temporary work assignment

Coffman Excavation will determine appropriate work hours, shifts, duration, and locations of all work assignments. Coffman Excavation reserves the right to determine the availability, appropriateness, and continuation of all transitional assignments and job offers.

Communication

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

Employee Responsibilities

Accident Reporting

An accident is any unplanned event that disrupts normal work activities and may or may not result in injury or property damage. All work-related accidents, injuries, and near misses must be reported immediately to Personnel.

If an accident occurs, but **does not** require professional medical treatment, the supervisor should immediately be informed so that an accident analysis can be completed. If first-aid treatment is needed, it should be sought on-site.

If an accident occurs which **requires professional medical treatment**, the worker should follow the emergency response plan. The worker must fill out a workers' compensation **801** form as soon as possible.

Worker's Physical Condition

If professional medical treatment is sought, the worker should inform the attending physician that Coffman Excavation has a return-to-work program with light duty/modified assignments available.

- The worker should obtain a **Release to Return to Work form** which is located at the following website, wcd.oregon.gov/policy/bulletins/docconv_9569/3245.pdf, and completed **job description** form (if available) from Personnel. This should be provided to the treating physician and should be returned to Personnel following the initial medical treatment.

Worker Able to Return to Work

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.

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

Worker Unable to Return to Work

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

- While off work, it is the responsibility of the worker to supply Personnel with a current telephone number (listed or unlisted) and an address where the worker can be reached.
- The worker will notify Personnel within 24 hours of all changes in medical condition.

Employer Responsibilities

Accident Reporting

The supervisor will conduct an accident analysis on all accidents, regardless of whether an injury occurs.

When an accident occurs which results in injury requiring **professional medical treatment**, Personnel will forward a completed workers' compensation **801** form to the insurance carrier within five calendar days of knowledge of the injury or illness.

Other information will be forwarded as soon as developed, including:

1. Name of worker's attending physician
2. Completed **Release to Return to Work** form from attending physician and medical documentation, if appropriate
3. Completed transitional/modified or regular **job description**
4. Job offer letter and responses

- The supervisor will notify the insurance carrier of any changes in the worker's medical orwork status as soon as possible.

Medical Treatment and Temporary/Transitional Duty Physical Condition

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.

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

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

Job Offer Letter

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.

- The letter will note the doctor's approval and will explain the job duties, report date, wage, hours, reported time, duration of transitional work assignment, phone number, and location of the transitional assignment.
- The worker will be asked to sign the bottom of the **job offer** letter indicating acceptance or refusal of the offered work assignment.
- Copies of the **job description**, **work releases**, and **job offer** letters will be forwarded to the insurance carrier.

Supervisor

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

The supervisor 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.

Worker Acknowledgment

- The return-to-work policy and procedures have been explained to me.
- I have read and fully understand all procedures and responsibilities.
- I agree to observe and follow these procedures.
- I have received a copy of this policy and procedure.

I understand failure to follow these procedures may affect my re-employment, reinstatement, and vocational assistance rights.

Employee Signature:

Date:

REGULAR JOB DESCRIPTION

Job Title at Injury: _____ Worker Name: _____
 Employer Name: _____ Claim Number: _____
 Date of Injury: _____

Job Duties (Be specific as possible breaking the job down into specific tasks performed and include the **% of time and \ frequency.**) Duties for all job tasks performed throughout the year should be included.

Tools & Equipment Used:

Hours per Day/Week
 Seasonal Work? No Yes **Duration:** _____

ENDURANCE

	Never	Seldom 1-5%	Occas. 6-33%	Freq. 34-66%	Continuous 67-100%	Total Hours At one time	Total Hours in a work day
Sitting							
Standing							
Walking							
Change Positions?							

PHYSICAL REQUIREMENTS: (Enter actual maximum weight in pounds in the box)

Lifting:

	Never	Seldom 1-5%	Occas. 6-33%	Freq. 34-66%	Continuous 67-100%
1-10 lbs					
11-20 lbs					
21-50 lbs					
51-75 lbs					
76-100 lbs					

Maximum # lifted by worker without assistance _____

If required, lifts over _____ # are performed with _____

two or more people
 lift devices

Carrying:

	Never	Seldom 1-5%	Occas. 6-33%	Freq. 34-66%	Continuous 67-100%
1-10 lbs					
11-20 lbs					
21-50 lbs					
51-75 lbs					
76-100 lbs					
>100 lbs					

Maximum # carried by worker without assistance _____

If required, carrying over _____ # is performed with two or more people or with lift devices.

Pushing/Pulling force to be exerted:

	Never	Seldom 1-5%	Occas. 6-33%	Freq. 34-66%	Continuous 67-100%
1-10 lbs					
11-20 lbs					
21-50 lbs					
51-75 lbs					
76-100 lbs					
>100 lbs					

Maximum weight of object pushed/pulled by worker _____

Distance: _____ Type of Surface (ie level, carpet, incline) _____

	Never	Seldom 1-5%	Occas. 6-33%	Freq. 34-66%	Continuous 67-100%
Bend/Stoop					
Twist					
Crouch/squat					
Kneel					
Crawl					
Walk-Level surface					
Walk-Uneven surface					
Climb Steps					
Climb Ladder					
Work at heights					
Reach at or above Shoulder					
Reach below shoulder					
Use of Arms					
Use of Wrist					
Use of Hands					
Grasping/squeezing					
Operate foot controls					

Environment: Inside _____ % of time Outside _____ % of time

Temperature Extremes Yes No

Vibration Yes No

Works on or around moving machinery or mechanical parts

Personal Protective Equipment:

Boots Hardhat Gloves Glasses Hearing Other _____

SIGNATURES

The information provided in this description, including strength and physical requirements, is based on observation of the job and is accurate to the best of my knowledge.

CHAPTER 8 MANAGEMENT OF ASBESTOS

Purpose

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

1. Procedures

- a. It is Coffman excavations 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).
- b. 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.
- c. 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.
- d. 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, or the EHS Manager before proceeding.

2. **It is Coffman Excavations 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).**

3. **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.**

4. Exceptions to Procedures

- a. Before any additional tasks can be performed with building products that may contact asbestos, they must be reviewed by Scott Brawner EHS Manager
- b. There are certain activities (See Table 1) 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.
- c. Before any of the tasks listed on Table 1 are performed, employees must:
 - i. Complete the mandatory training in asbestos hazards (either Class IV, Class III, or Class II Asbestos Training).
 - ii. 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.
 - iii. Review the previous air monitoring results for the specific type of work, engineering controls, etc.
 - iv. 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.

- a. For Jobs Not Listed Above
- i. Before any additional tasks which may cause asbestos exposure can be performed (of those not listed above), a review and evaluation by Scott Brawner and air monitoring must be performed.

Training

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

- b. Information regarding asbestos use and forms
- c. Information on health effects associated with asbestos exposure
- d. Locations of asbestos-containing building materials on the jobsite
- e. Recognition of damage, deterioration, and delamination of asbestos material
- f. Name and telephone number of person in charge of management plan as well as access to management plan

Administrator

Scott Brawner or acting safety manager 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.

CHAPTER 9

HEARING CONSERVATION PROGRAM

Introduction

Coffman Excavation 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 Scott Brawner who will schedule the monitoring through our:

A. Insurance carrier industrial hygienists

B. OR-OSHA consultative, or an independent industrial hygiene company.

1. 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.
2. The following procedure outlines how we will accomplish this plan.

C. Hearing Detection

1. Hearing protection devices will be made available and worn by each employee included in this program at no cost to the employee.
2. Employees will have two or more styles of hearing protectors from which to select.
3. Hearing protectors furnished will provide a noise reduction rating (NRR) sufficient to reduce the noise exposure to below the guideline level of 85dBA.
4. Each type of hearing protection will be evaluated as to its effectiveness in protecting the employees' exposure according to OAR 1910.95 (j) and 1910.95 Appendix B.

D. Training

1. 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 may be scheduled with Scott Brawner Prior to exposure of high noise levels, employees will be trained in:
 - a. Effects of noise on hearing
2. The purpose of hearing protectors, the advantages, disadvantages and attenuation of various types, and instructions on selection, fitting, use, and care.
3. The purpose of audiometric testing and an explanation of the test procedures

4. Location of copies of Oregon Administrative Rules 1910.95 for employees working in Oregon, Washington Administrative Codes 296-62-09015 to -09055 for employees working in Washington, Mine Safety and Health Administration Title 30 Code of Federal Regulations Part 62, and company training materials on occupational noise exposure that are available for their review.
5. The right to access records
 - a. Documentation Pre-employment baseline will be maintained on file by the human resources department.

CHAPTER 10

EMERGENCY CRISIS PLAN

Emergency Action Plan

Every Coffman Excavation location, such as the main office or warehouse, and each Coffman Excavation project shall develop a written site specific emergency action plan (EAP) that includes posting the plan, providing first aid supplies and emergency response equipment, training on the plan, equipment use, and equipment inspection, identifying roles & responsibilities for the Coffman Excavation response team, identifying nearby clinics, hospitals, or triage service, and methods for signaling an evacuation and other alerts. The emergency action plan for Coffman Excavation's main office is in Appendix 7a and the warehouse EAP is in Appendix 19a. Individual project emergency action plans shall be developed and included in the Site-Specific Safety Plan prior to the project start.

The emergency action plan must be in writing and posted in the workplace in a location where all site employees and subcontractors or visitors can have access to the plan to review, understand, and utilize in case of emergencies. Personnel may contact Coffman EHS Manager, Scott Brawner, for any additional information pertaining to the plan or clarification on their individual roles & responsibilities (503-449-7046 or sbrawner@coffmanteam.com)

The plan will be reviewed with:

- 1) all employees upon assignment
- 2) with project personnel when project plan is developed
- 3) with subcontractors and visitors during safety orientation or
- 4) after the plan is modified or 5) if roles are changed when personnel mobilize to or leave the project.

Utilize the emergency response templates in Appendix 7b to develop specific, written plans for any potential emergency situations. A completed Appendix 7b becomes the project Emergency Action Plan (EAP). Once complete, insert Appendix 7b into the Site-Specific Safety Plan for the project and post the plan in an area that is accessible to all personnel on the project, such as in the orientation room or near the first aid kit and AED.

A. Each plan must include the following:

1. A Site Map with Fire extinguishers, First Aid Kit, Trauma Kit, AED, Eye Wash, Spill Kit, Emergency Assembly Areas, and Exits/Egress Routes identified on the map
2. Name and emergency points of contact numbers for local utility providers, OSHA, EPA, emergency medical providers, & Coffman (and owner) response team
3. Response procedures for reporting fire, medical emergency, natural disasters such as lightning in proximity, severe winter weather, chemical spill, emergency evacuation, exit routes, active shooter, bombthreat, and threat of violence
4. Procedure to account for all employees after the evacuation and method to convey an "all-clear"
5. System in place to alert employees of emergency response. The alert must be distinctive, audible/visible to all and distinguish between an evacuation and other emergency actions, such as shelter in place
6. Each plan should utilize the Emergency Response Flow Chart to help identify roles & responsibilities in any situation. Be aware that depending on who is available onsite during an emergency, the roles are fluid. Often the first person arriving on scene operates as the interim Incident Commander until that designated person arrives.

B. Emergency Procedures for Specific Situations



Figure 1.

Emergency Response Flow Chart

1. In all scenarios, the first trained responder to arrive on-scene becomes the defacto incident commander until the appointed incident commander or their back-up arrives. The incident commander should consider necessary actions based on pre-established actions for logistics of response, funding or support needed, operations impact, safety and first aid, and communications required (See Figure 1 Emergency Response Flow Chart). Several Coffman personnel (and perhaps subcontractor or owner personnel) should be assigned as having roles in each of those areas in the emergency flow chart. In some cases, depending on availability of resource (night shift, holidays), the incident commander or others may need to know and cover for absent team members.

A. Contact List

1. Identify the local and regional organizations and contacts for electrical, water, gas, telephone, sewer, hazardous waste disposal, chemical/biological spills clean-up, severe weather, OSHA, police, fire, and ambulance. In addition, generate a contact list of Coffman personnel who will perform emergency response roles as the incident commanders, spokespersons, logistics, safety/first aid, and financial

considerations. Include on the contact list the site security contact, as well as, the point of contact for the client or building owner/rep (Appendix 7b).

B. Lightning in Proximity

1. Establish a method to monitor when lightning is within 10 miles of the jobsite (Use WeatherBug, Red Cross Emergency, Accu-weather, or other notification Apps, weather stations or other tools). Set up a method to alert the jobsite/facility to seek shelter (What's App, Group Emergency Text, Air horns (one long blast), Mass Communication System). Establish a plan to seek shelter indoors, in a Conex, in trailers, in vehicles with windows rolled up when lightning is in proximity, rather than evacuating to an outdoor marshalling point during lightning storms. Regarding cranes: land the load, lower the boom, shut off all electrical power, secure and leave the crane.
2. The project should determine in advance who will make the call to seek shelter and when. The person or people who typically make the call are the incident commanders (i.e. lead superintendent and lead safety professional). The project leadership team should confer when needed. Determine in advance the criteria for when to send the signal and when to send the all-clear signal. The best practice is to give the all-clear 30.

“If you can see it, flee it; if you can hear it, clear it”

3. The default is to signal the alarm when lightning is within 10 miles from project, however it's best to determine how long it will take your project to find shelter, factor in the number of people on the project, factor in distance from worksite to shelter, factor in typical speed of storms in the area. For example, if storms in a particular location move at 30 mph, the storm will travel 10 miles (and reach the project) in 20 minutes—determine if the site personnel can realistically be alerted and find shelter within 20 minutes. Once the site rule is established, the person responsible for monitoring the lightning proximity is identified having the safety role on the emergency flow chart.
4. Pre-assign the person(s) who will be responsible for signaling the “Seek Shelter” notice. That person should be identified as the communications person on the emergency flow chart. Someone who typically is located near a computer or in the office is best suited for that role since that will involve sending a text, message, or using the mass communication system. If the project is using an airhorn to signal the alarm, it's likely the people handling the logistics arm of the emergency flow chart will be the ones on site blasting the signal.
5. Establish in advance who will be involved in signaling an airhorn or confirming that all personnel have been alerted and are seeking shelter. Train all responders on the protocol and all site personnel during orientation.

C. Severe Winter Weather

1. Establish a method to monitor weather conditions (Use the WeatherBug App, Red Cross Emergency App, AccuWeather App, weather stations or other tools). Set up a method to alert the jobsite that project is shut down due to inclement weather (What's App group of project supervisors, emergency text message group, calling tree, mass communication system, etc.). Establish in advance who will make the

determination and what criteria trigger a response. Train responders in the protocol. Send an alert several hours prior to the morning commute. If inclement weather occurs during the shift, do not signal an evacuation because that will direct people to an outdoor marshalling point. Instead, gather personnel into a sheltered or indoor meeting area to announce job-shutdown. Typically, the incident commander is making the announcement or directing others to send the notification. In some extreme weather, sheltering in the building may be the best option.

D. **“Man-down” Situation**

1. Establish in advance the emergency response team roles & responsibilities for when there is a medical emergency. Call 911, onsite medical professional or AMR depending on the severity of the event; default to a worst-case prediction when deciding. The AMR Red Form (Appendix 8) lists conditions that constitute an emergency and may help the team determine when to call 911 versus other services. Alert the project response team, Coffman supervision, owner rep & security during a medical emergency. The incident commander should take control to coordinate securing the area, calling for first aid, alerting the team, and etc. All Coffman personnel are required to be trained in CPR, first aid and AED, although providing first aid or CPR is voluntary.

2. Have Safety/First Aid personnel fetch the Automated External Defibrillator (AED) and Grab & Go Trauma Kit. Have project spokesperson/communications notify Coffman safety leader or Coffman management, owner representative and site security. Post logistics personnel at key locations to escort or flag down emergency responders. Send notice to heavy equipment operators to “freeze equipment” when emergency vehicles are onsite. Secure location of individual and safe off area if any imminent danger is present (only do this if it can be done without injury or harm to yourself or others). Keep unauthorized personnel out of area. Don gloves, glasses and/ or shields. Provide aid/CPR to injured or ill personnel (this is voluntary). Stay until emergency responders arrive and/or the individual recovers or is transported.

E. **Start an accident investigation** once the injured have been cared for and once the location is safe to enter. Keep area, tools, & equipment secure with red danger tape until the accident investigation is complete. Notifications may need to be made to Federal OSHA, State OSHA, EPA (if chemical spills are involved) or utility companies, and insurance (workers compensation, general liability, etc.). Do not relinquish the area until the investigation is complete or until any insurance or government agencies have completed their investigation (for major events) Site Evacuation (Fire/Gas Leak/Chemical Leak/Structural Failure/ Earthquake/Imminent Electrical Hazard)

F. **Site Excavation (Fire/Gas Leak/Chemical Leak/Structural Failure/Earthquake/Imminent Electrical Hazard)**

1. Establish an emergency marshalling point, evacuation signal, emergency response team roles & responsibilities. The emergency marshalling point should be designated with large clear signs and introduced to all site personnel during site safety orientation and intermittently through practice drills.

2. During an emergency, call 911. Alert response team, Coffman supervision, owner rep & security. Signal site evacuation. Typically, the signal is three short blasts on air horn or siren, a short pause and three short blasts, repeat. Signs noting the alarm signal should be posted near all air horn locations. Calmly safe-off area/systems and start evacuation. Coffman safety or Superintendent should mobilize to the marshalling point. The response team should sweep

buildings/Trailers/Laydown/Outbuildings to signal and facilitate the evacuation. The logistics personnel should assign evacuating project personnel to the emergency marshaling point. The Incident Commander should instruct personnel not to leave the site and not to go to their cars.

3. The Spokesperson/communications person should notify Coffman safety and/or Coffman management of incident. Site security and owner representatives (including the building owner's safety professional) should be notified by the project spokesperson.

4. At the marshaling area, each company supervisor should take a head count of their personnel and report to the Coffman superintendent. The Incident commander should be in communication with first responders. It is the incident commander who gives the "All-clear" to return to site once the responding authorities inform the project that it is safe to return. Alternatively, the incident commander should discuss and consider the logistical aspects, financial impacts, and safety aspects to determine if the site needs to be shut down for the day or for several days.

5. Start the accident investigation. Keep area, tools, equipment secure with red danger tape until the accident investigation is complete.

G. **Bomb Threat**

1. Establish *alternate* emergency marshaling point(s) and evacuation signals, threat response team roles & responsibilities. Train personnel utilize the Threat Documentation Form in Appendix 7d to log a threat received by phone. The Coffman threat response team should use the US Department of Homeland Security and Department of Defense Risk Assessment chart to ascertain the level of risk (App 7c – Risk Level Matrix). Alert Coffman supervision, owner rep & security. Call 911 and specify that it's a bomb threat and the level of risk. If the level of risk dictates an evacuation or lock down, signal the site evacuation (Typically three blasts on air horn or siren). Calmly safe-off area/systems and start evacuation. Place trained Threat Response Teams along evacuation path *to intercept and redirect* personnel to *alternate* assembly areas.
2. Do not evacuate to "normal" marshaling point as this might be a target.
3. A company supervisor should mobilize to each alternate marshaling point. Response team should sweep Buildings/Trailers/Laydown/Outbuildings to signal and facilitate the evacuation.
4. Lock-down site. Do not leave the site, do not go to cars.
5. The spokesperson should notify Coffman safety/management, site security and owner's representative of threat. Ensure that the Incident Commander or representative becomes the point of contact for ATF, FBI or Bomb Threat responders
6. At the alternate marshaling points, each company supervisor should take a head count of personnel and report to incident commander via text, radio, App, or cell.
7. Consider that the site might be locked down for several hours. Ensure water and other necessities, such as first aid supplies or access to restrooms, are available or distributed. It is the role of the logistics personnel to help facilitate water/first aid distribution. The logistics personnel should notify the incident commander in advance that they are moving between marshaling points during the lock-down.
8. The incident commander shall give the "All-clear" to return to site once notified by bomb squad. Start accident investigation. Keep area, tools, equipment secure with red danger tape until the investigation is complete

H. **Active Shooter**

1. Establish a threat response team roles & responsibilities and provide specific training for active shooters.

2. Run, if possible (encourage others to run). Hide, if you can't run (lock doors, take shelter behind concrete, etc.). Fight, if confronted (use any and all tools or equipment available to you).
3. If hiding, remove high visibility garments. Silence phones, disable vibrate feature, dim screen illumination, but keep phone on, in order to alert responders to events and to stay apprised of the situation.
4. Alert threat response team, Coffman supervision, owner rep & security. Signal active shooter warning via What's App. Warn others to stay away from site. Do not marshal or congregate in groups, since this can become a target area. The project spokesperson should notify Coffman safety and management of incident in a safe location.
5. If police or SWAT arrives, follow their directions. When directed to, head towards them with hands up, fingers spread. **DO NOT CARRY CELL PHONE OR ANYTHING ELSE IN HANDS.**
6. Organize Lockdown behind police or SWAT perimeter (if directed). The Incident commander should remain in communication with first responders unless they are in the danger zone (hiding or fighting nearshooter)
7. Police or SWAT will determine when to issue the "All-clear" to leave site. Authorities will conduct an accident investigation. The site might be closed for several days. Expect media and rely on local authorities to speak to the media. Do not provide any statements. The Coffman Safety Team should meet to determine actions needed in the aftermath (emotional support services, medical care, notifications, business continuity plan, inspection and assessment of site damages prior to return to work). Cascade Centers (EAP) offers consultation services to Coffman personnel for stress/crisis available 24/7 (800-433-2320). Do not assume that people are fine.

I. Threat of Violence

1. Establish a threat response team. Train the threat response team to recognize warning signs, signs of threat escalation and required actions. Train employees to utilize the Threat Documentation Form (App 7d) to document threats arriving via phone. This documentation can be adapted for other forms of notification. Appendix 7c, Risk Level Matrix can also be utilized to ascertain the credibility of the threat.
2. If report of threat of violence occurs, initiate investigation to determine the next actions. Keep information and notifications "need to know". Coffman safety/supervision may utilize the consulting services of Cascade Center affiliated with the Employee Assistance Program (800-433-2320). They are available 24/7 to help guide us with determining the level of threat and to help advise us on the likelihood of threat escalation. If the threat originates (or you suspect that the threat originates) from a Coffman employee, include HR and the Coffman Safety Lead in the discussion and decision-making. Document of the investigation.
3. If threat is credible notify owner, campus security and Coffman safety & management. Contact police to report or have security/owner contact police. Allow authorities to advise and respond.

J. Mental Health Crisis Intervention

1. Bomb threats, active shooter events, and threats of workplace violence typically do not occur "out of the blue" without leading indicators of early signs of mental crisis or escalating behavior. This fact affords an employer (or a proactive member of the community) the opportunity to intervene, and course correct from a catastrophic trajectory.

2. A healthy mindset is one where employees find the joy and meaning of work and of life. Depression, financial stress, marital strife, relationship turmoil, resentments and frustrations can escalate into an untenable state. We should strive to create a workplace culture where every employee can answer, “yes” the following three questions:
3. Am I treated with dignity and respect by everyone, every day, in each encounter, without regard to race, ethnicity, nationality, gender, religious belief, sexual orientation, title, pay grade, or number of degrees?
4. Do I have what I need: education, training, tools, financial support, encouragement so I can make a contribution to this organization that gives meaning to my life?
5. Am I recognized and thanked for what I do?
6. Coffman supervisory personnel will be trained to recognize the signs and symptoms of an employee in crisis and given direction on appropriate responsive actions. Coffman supervisors can take advantage of free consultation advice from Cascade Centers available 24/7 (Cascade Management Consultation (800) 433-2320); this service provides management consultation for difficult interactions. 911 should be called immediately if your safety is in danger.
7. All concerning, threatening or violent behaviors or actions occurring in a Coffman office or on a Coffman jobsite, must be reported to Scott Brawner, EHS Manager. Some threats may need to be reported to the authorities such as police, homeland security or the FBI.

All non-union personnel can confidentially utilize the services of the Employer Assistance Program (Cascade Centers call (800) 433-2320; or text (503) 980-1777). NW Carpenters EAP Hotline is 1 (800) 273-8255 and is available and accessible to all personnel in the construction industry (Suicide Prevention Talk Hotline).

Matrix to Assess the Level of Risk

How valid is the threat? Check all the factors that apply in order to determine the level of risk and identify the recommended actions

RISK LEVEL	RISK SUMMARY	FACTORS THAT ESTABLISH THE RISK LEVEL
HIGH RISK	<p style="text-align: center;">Specific and Realistic Risk: Threat appears to pose an immediate and serious danger to the safety of others</p>	<input type="checkbox"/> Threat is direct, specific and realistic. May include names of possible victims, specific time, or location of device. <input type="checkbox"/> Perpetrator provides their identity <input type="checkbox"/> Threat suggests concrete steps have been taken towards carrying out the threat <input type="checkbox"/> Perpetrator indicates they have practiced with a weapon or have intended victim(s) under surveillance
MEDIUM RISK	<p style="text-align: center;">Increased level of realism: Threat that could be carried out, although it might not appear entirely realistic</p>	<input type="checkbox"/> Threat is direct and feasible <input type="checkbox"/> Wording in the threat suggests the perpetrator has given some thought on how the act will be carried out <input type="checkbox"/> May include indications of a possible place and time <input type="checkbox"/> No strong indication the perpetrator has taken preparatory steps, although there may be some indirect reference pointing to that possibility <input type="checkbox"/> Indication the perpetrator has details regarding the availability of components needed to construct a bomb/device <input type="checkbox"/> Increased specificity to the threat (e.g. "I'm serious!" or "I really mean this!")
LOW RISK	<p style="text-align: center;">Lacks Realism: A threat that poses a minimum risk to the victim and public safety. Probable motive is to cause disruption</p>	<input type="checkbox"/> Threat is vague and indirect <input type="checkbox"/> Information contained within the threat is inconsistent, implausible, or lacks detail <input type="checkbox"/> Caller is definitely known and has called numerous times <input type="checkbox"/> The threat was discovered instead of delivered (e.g. a threat written on a wall)

RISK LEVEL	RECOMMENDED ACTIONS
HIGH RISK	<p style="text-align: center;">Contact authorities. Consider job shutdown, sweep of project by specialist, posting added security or using police canines upon return.</p>
MEDIUM RISK	<p style="text-align: center;">Contact authorities. Consider partial job shutdown: critical operations only, sweep of project by specialist, posting added security or using police canines. Consider installing monitoring devices or cameras.</p>
LOW RISK	<p style="text-align: center;">Convene project Threat Response Team, contact client, contact Fortis management to determine needed actions. Consider installing monitoring devices or cameras or increasing security presence.</p>

Based on the US Department of Homeland Security and Department of Defense Risk Assessment Chart

Appendix 7c - Risk Level Matrix

K. Spokesperson/Communications

1. In the unlikely event that a project spokesperson is given approval to speak to the media, the following sections provide examples of statements to buy time, inform concisely with detailed or brief statements and alternatives to saying, “no comment”. Seek advice from Coffman senior management or Coffman counsel prior to speaking to the media.

L. “Buying Time” Statements

1. “We’re aware of the situation and are investigating the details. We will keep you informed as the situation progresses.”
2. “The cause of the accident is not known at this time. The investigation is continuing, and we are working closely with the authorities.”
3. “We’re aware of the situation and are investigating the details. We will keep you informed as the situation progresses.”
4. “Due to the rush of the emergency, information is not yet complete.”
5. “Our management team cannot be reached because they are handling the emergency. As soon as we receive verifiable information, we will share it with you.”
6. “We have no information as to the extent of the emergency at this time. As soon as we receive verifiable information, we will share it with you.”

M. Detailed Statement Examples

1. “My name is ___. I’m (position)___ with Coffman Excavation. At approximately (time)___, one of our workers accidentally hit an underground electric cable, disrupting service to ___. At this point, we have contacted the utility company, whose crew are on their way to repair the line. We don’t know how extensive the damage is, but I’m sure the utility people will be able to provide you with those details once they review the situation.”
2. “The location of the line break is approximately_.”
3. “Because our employees adhered to our strict safety policies, no one was injured and there was no further damage to the area.”
4. “At this point, that’s all the information I have. Our company spokesperson is on the way to provide you with further details, but right now all I ask is that you stay in this area, away from where the line break occurred, so emergency personnel and utility employees will be able to work on the line. We’ll keep you posted on any further information.”

N. Brief Statement Examples

1. Joe Smith, 20, of Hillsboro was injured Tuesday morning at 8:45 a.m. on the XYZ construction site in Portland. Smith, who is a carpenter apprentice for (Company), suffered multiple injuries because of the 30- foot fall. He is reported in critical condition at OHSU in Portland. The safety and wellbeing of the people on our projects is our highest priority. We are cooperating fully with the investigation to find out how this happened, so we can make sure that it never happens again.”
2. Alternatives for “No Comment”
3. I’m not the best source of information for that. The person you need to talk to is...”



Coffman Excavation

EHS Manual

ENVIRONMENTAL, SAFETY AND HEALTH PROGRAM

CHAPTER 11 - Policy for protection from Wildfire smoke

Purpose

This procedure has been developed in accordance with the Oregon OSHA (OAR 437-002-1081 Protection from Wildfire Smoke) and Cal OSHA requirements in §5141.1 Protection from Wildfire Smoke to be used under the guidance of Coffman excavation EHS Manual - Respiratory Protection Program.

Scope

This procedure applies to workplaces where the current Air Quality Index (AQI) for Particulate Matter 2.5 (PM2.5) is 151 or greater, regardless of the AQI for other pollutants, and where the Company reasonably anticipates exposure to wildfire smoke.

Employees working in the following environments or conditions are exempt from this policy.

- Enclosed and mechanically vented buildings or structures as long as windows and doors remain.
- Enclosed vehicles inclusive of heavy equipment where the cabin air is filtered, and windows and doors are kept closed;
- Where the Company has demonstrated that PM2.5 concentration does not correspond to an AQI greater than 151; or
- Employees exposed to a current AQI for PM2.5 of 151 or greater for a total of one hour or less during a shift.
- Employees working from home.

Responsibilities and Requirements

The Company must determine Employee exposure to PM2.5 for covered worksites before each shift and periodically thereafter, as needed to protect the health of employees by obtaining the current AQI for PM2.5 by checking with specified government agencies or websites.

Suitable web-based sources for determining the AQI for a specific area include <https://www.airnow.gov>
<https://gispub.epa.gov/airnow/>

Wildfire smoke hazards will be communicated to all employees with effective readily understandable instruction on the health effects of wildfire smoke, two-way communication, administrative controls, and engineering controls and the maintenance and use of respirators.

Where possible, reduce harmful exposures to wildfire smoke through engineering controls by providing enclosed buildings, structures or vehicles with filtered air, or by relocating work to a location where the AQI for PM2.5 is less than 151.

Where possible, reduce harmful exposures to wildfire smoke through administrative controls.

Relocating affected Employees to another work location with an acceptable AQI, changing work schedules, reducing work intensity, or providing additional rest periods.

If unable to reduce exposure to wildfire smoke so that the AQI for PM_{2.5} is less than 151, the Company must provide a sufficient number of respirators such as N95 masks to all Employees for voluntary use.

Employees shall be trained annually and are potentially exposed to an ambient air concentration for PM 2.5 at or above AQI of 101.

If the AQI for PM 2.5 is greater than 500, mandatory respirator use (and the associated provisions) is required to include half or full-face mask elastomeric respirators with a suitable protection factor for the environment.