



OCCUPATIONAL HEALTH AND SAFETY HANDBOOK

Senior Management is highly committed to matters of health and safety within the organization. Having the overall responsibility and accountability for the protection of workers, management will integrate processes and requirements into the organization's business processes as needed. It is management's job to communicate decisions and processes within the organization and among interested parties – both internal and external. Management shall review policies and procedures on at least an annual basis to ensure health and safety information is being communicated and disseminated within the organization. Employees are key to the establishment and compliance of the OH&S policies. Employees will hold the same responsibility as management in committing to strong health and safety practices within the organization.

New employees

Upon employment with WSI Enterprises Inc., each new employee will receive this OH&S handbook and sign an acknowledgement of receipt and understanding. As new/revised topics are added to the handbook they will be discussed with existing employees. These discussions will be documented and recorded in each attending employee's personnel file. Each new field/shop employee will be required to attend classes for the following topics as soon as practicable after their hire date: Hazard Communication, Personal Protective Equipment, Fire Safety, Lockout/Tagout, Confined Space Awareness, HAZWOPER Emergency Response Awareness Level, Respiratory Protection Equipment, and H2S. (Basic Safety Environmental Training, BEST offered by San Juan College) and/or equivalent classes provided by 3rd party contractors or provided within the Company. Other training may be required for specific employees depending on their job description.

Personal protective equipment (PPE)

WSI Enterprises Inc. always enforces the use of proper PPE. PPE includes safety glasses, steel toe boots, correct gloves for the work required, a respirator, face shields, hard hat and hearing protection. All PPE will be provided by WSI Enterprises Inc. except for steel toe boots which must be provided by the employee. Any employee who has passed their initial 90-day review period may purchase a pair of steel toe boots and submit the receipt to Human Resources for reimbursement. Any employee who requires PPE due to lost or damaged equipment may have them replaced by the HSE Coordinator. The Company may provide some Fire Resistant (FR) clothing at its expense, but employees may also provide their own FR clothing.

Forklift operating

All employees who may operate a forklift must complete the Forklift Operators Training Course held at WSI Enterprises Inc. Upon completion of the training the employee will receive a Certificate of Completion and will be authorized to operate forklifts on WSI Enterprises Inc. property. Any employee who has not completed the training course is not authorized to operate a forklift.

Recordkeeping

WSI Enterprises, Inc. will maintain current records of all training for Company employees.

Accidents and incidents

Any employee who is involved in an On-the-Job accident or incident must report it immediately to their supervisor which will then be reported to the HSE Coordinator. Accident injuries and Near Miss incidents will be investigated by HSE to incorporate policies and/or procedures to eliminate the hazard. If an employee is involved in an accident or incident and their immediate supervisor is not available, the employee may report it directly to the HSE Coordinator, Chief Executive Officer, General Manager or Human Resources. The involved employee and/or employee's supervisor will complete an incident report for inclusion in the Company's records and to identify opportunities for workplace improvements.



NEW EMPLOYEE SAFETY ORIENTATION

1. The use or possession of alcoholic beverages, drugs, unauthorized firearms, or weapons on the job site is strictly forbidden and will result in immediate disciplinary action up to and including termination.
2. Horseplay, scuffling and other acts that tend to have an adverse influence on safety or the well-being of employees are forbidden.
3. Means of egress must be unobstructed, well-lit, and unlocked during working hours.
4. Work areas should be maintained in a neat, orderly manner. Trash and refuse are to be deposited in proper waste containers.
5. Cabinet doors and drawers should be kept closed when not in use to prevent accidents.
6. When using stairs, take caution. Use handrails. Take one step at a time. Keep stairs clear and well lit.
7. When carrying material, use caution. Watch for obstructions and loose materials. Ensure proper lifting technique and if an item is too heavy, seek additional employee help before moving manually.
8. Clean up broken glass with a brush or broom, never bare hands, or fingers. Wrap broken glass in paper to protect others.
9. Do not stack materials in an unstable manner or on top of lockers, cabinets, pallets, or high places.
10. To prevent a serious shock or possible electrocution, keep hands dry and prevent dampness near all electrical equipment. Ensure all electrical equipment cords and power supplies are in a good and workmanlike condition.
11. Maintain sufficient access and working space around all equipment to allow safe operation/maintenance.
12. Before using electrical equipment, inspect it for damage, missing guards etc. If there is a problem, do not use or attempt to repair it. Report the problem immediately to HSE. Place a red tag, with identifying information on the piece of equipment removed from service.
13. Never remove the electrical grounding wire (3rd prong) to allow an electrical connection to a non-grounded receptacle.
14. Do not use any portable electric tools or equipment that are not grounded or double insulated.
15. All electrical equipment must be plugged into an appropriate wall receptacle or extension cord of equal or greater size and capacity. Never overload an electrical connection to prevent the possibility of a fire.
16. Report suspected electrical problems immediately. A slight tingling or shock, sparking, over heating or a burning smell are urgent warnings of danger.
17. Report exposed wiring and cords with frayed, deteriorated, or damaged insulation. They must be repaired or replaced immediately.
18. All electrical cords and air hoses running into walking areas must be taped down or inserted through a rubber protector to prevent them from becoming a trip hazard.
19. Guards should never be removed under normal working conditions. If it is necessary to remove a guard to make adjustments or repairs, the power supply should be turned off and locked/tagged as required, to replace it immediately after completion of the repair. If a guard is not in proper working condition or is missing, report it immediately to HSE and place a red tag, with identifying info on the equipment.
20. Before using any ladder, examine it for cracks, broken or loose rungs or any other defect. To prevent slipping, have a co-worker hold the bottom of the ladder for stability. Never use a metal ladder where it could come in contact with electrical wires, motors, transformers or any other energized components.
21. Never use makeshift scaffolding, rigging or stages, without proper equipment and training
22. Shut down your machine before cleaning, adjusting, or repairing. Lockout and tag the machine to prevent accidental start-up.
23. Never lubricate machinery in motion unless points of oiling are located or guarded in such a way as to protect you from moving parts.
24. Never use your hands or fingers to remove debris from machinery. Use a brush, hook, or another tool.
25. Never use defective hand tools. Flying debris from broken tools can cause serious injury. Have defective tools repaired or replaced before using them. Remove defective tools from service and notify Supervisor.
26. Your Personal Protective Equipment (PPE) safety glasses, goggles, face shields, hearing protection, respirators, hard hats, gloves etc. are for your protection. Use them!

27. Never operate any machine, forklift, or any other piece of moving equipment unless you have been trained and authorized by qualified personnel. If you do not know how to operate a piece of equipment, contact your Supervisor to secure training and knowledge to operate that equipment safely.
28. Riders are never allowed on any material moving equipment such as forklifts.
29. Keep your work area clean and orderly. Store material, skids, boxes, ladders, and other equipment properly. Do not block exits, aisles, fire extinguishers, power panels or electrical shut-off switches.
30. Keep floors clean, dry, and free of any material that may cause a slip or fall.
31. If you see someone working carelessly, advise them to work safely. Their actions affect the safety of their co-workers as well as themselves. Discuss with them the potential consequences of their actions.
32. Report any smell/detection of Propane (LP) or Natural Gas to HSE. Do not attempt to correct it yourself.
33. Always wash hands thoroughly after using any hazardous chemical, especially before eating or smoking.
34. Warning signs help you prevent accidents. Obey them! Remind others to do so as well.
35. Before using any chemical, read their labels carefully and follow safety warnings, mixing instructions etc.
36. Material Safety Data Sheets (MSDS) and/or Safety Data Sheets (SDS) books are available. Use them to be aware of potential hazards from any chemical you are using. MSDS and SDS info is available online.
37. Report all spills or accidents involving a hazardous chemical immediately.
38. Identify the contents of pipes before starting any work that affects the integrity of the pipe. Beware that pipes may contain trapped pressure and/or substances.
39. Always keep toxic or flammable chemicals in closed containers when not in use.
40. Always store flammable chemicals in fireproof cabinets.
41. Do not eat in areas where hazardous chemicals are present.
42. Report all chemicals that cannot be identified due to missing or illegible labels. Inform your supervisor so that correct labeling can be placed on the product.
43. In the event of a fire, give the alarm and evacuate the building through the nearest emergency exit. Only trained workers may respond to a fire or other emergency.
44. Do not open more than one drawer at a time, particularly the top two drawers on tall file cabinets.
45. Individual space heaters in work areas should be kept clear of combustible materials such as drapes, wastebaskets, or flammable chemicals. Only UL approved heaters with tip-over protection may be used.
46. Appliances such as coffee makers and microwave ovens should be kept clean and in good working condition. Faulty equipment can cause a fire.
47. Inspect motorized vehicles or other mechanized equipment daily or at the start of each shift.
48. Shut off engine and set brakes before loading or unloading a vehicle.
49. Observe all safety rules when operating a forklift. Only trained/authorized personnel may operate one.
50. Always secure compressed gas cylinders to avoid tipping and falling. Do not store cylinders in areas that are exposed to heat sources, electrical sparks or high temperatures.
51. Do not use compressed air for cleaning off clothing or blowing debris from your work area.
52. When using air nozzles, use only OSHA approved types that limit tip pressure to 30 PSI.
53. First-Aid kits are available, ask your supervisor for locations. If a First-Aid Kit is missing certain items, please inform your supervisor, so replacement items can be installed within the First-Aid Kit.
54. Safety Slings are NOT to be used in paint booths. Dried paint with Xylene thinner can weaken the synthetic fiber strands. Use safety chains instead and take care not to paint over rating labels.
55. Safety toe shoes are required to be worn by all employees while in the shop. All safety shoes must be stamped or labeled ANSI Z41 PT83 or PT99.
56. All safety slings and chains must be marked with vertical/choker/triangular load ratings. All chains/slings that are not marked with these ratings must be turned into the HSE department for proper disposal. If a chain does not have current certification, remove it from service until a newly certified one is available.
57. All hazardous chemicals must be stored in the HazMat storage unit. Any chemicals used during working hours must be placed back into the storage unit at the end of each day.
58. Respirators must be used when spraying solvent/paint/degreaser in the paint booth. One respirator will be issued to each employee which should be marked with the employee's name and kept in a locker. Replacement cartridges will be kept at HSE and will be issued as needed.
59. All employees who wear prescription glasses must wear side shields when south of the yellow safety line. Side shields are kept in the WSI reception desk and the HSE department and will be issued as needed. Proper eye protection is part of your individual PPE.
60. Smoking is prohibited inside the WSI office and shop facility.



LIGHT OR RESTRICTED DUTY POLICY

The purpose of this policy is to establish procedures for an effective light duty program to address return to work from an on-the-job injury and to provide for a means to allow an employee to return to work prior to a full medical release thus allowing an employee to return to productive employment as soon as he or she is physically able.

Light (limited) duty procedures

1. All employees injured while in the scope and performance of their duties shall strive to return to work as soon as possible with the treating physician's concurrence. The employee shall request that the physician return them to light duty as soon as possible. The employee shall, if the physician indicates that the employee is not capable of returning to his/her normal duties, request that the physician evaluate the employee for a light duty assignment such as but not limited to clerical duties including answering the telephone, filing or similar duties.
2. Upon being released by a physician to return to work on a light duty basis, the injured employee will immediately report to the Human Resources Department with a form furnished by his or her physician indicating any restrictions.
3. The Human Resources Department or designated representative will interview the employee to review his/her physical restrictions and to determine his/her education, training, experience, and skills. This information will be used in determining light duty assignments for which the employee is qualified and physically capable of performing.
4. The Human Resources Department or representative will contact the corporate CEO and/or Director of Operations to determine if the injured employee can be utilized in any position within the company.
5. If there are no meaningful tasks available that the injured employee can perform, the injured employee will be sent home subject to being called back should appropriate light duty become available. A light duty assignment is not guaranteed to an injured employee.
6. An employee who is assigned to light duty shall not be assigned to any duties, even temporarily, that would require the employee to perform duties that are not within the restrictions placed by the physician or that could be considered the normal duties of the employee.
7. An employee who is assigned to light duty will be required to periodically furnish a written statement from his or her treating physician that he or she is incapable of performing his or her normal duties.
8. In no event will an employee be allowed to perform more than 520 hours of light duty except as provided below. On completion of 440 hours of light duty the employee will be required to furnish a written statement from his or her physician that indicates a "DATE CERTAIN" that the employee will be able to return to his or her normal duties. The period of light duty shall not be extended unless the "DATE CERTAIN" provided by the employee's physician does not exceed an additional 80 hours of light duty, this period cannot be further extended.
9. If the "DATE CERTAIN" is past the maximum number of hours allowed for light duty (520) plus any allowed extension the employee will be required to return to a Temporary Total Disability status under the New Mexico Worker's Compensation Program and/or applicable law. When able to return to work the employee is not assured of placement in the employee's former position.
10. A light duty position shall not be available for any injury or illness not incurred in the course and scope of employment i.e., an injury or illness which is determined not to be covered by the New Mexico Worker's Compensation Program and/or applicable law.



WEAPON AND FIREARM POLICY

The carrying or possession of any type of weapon or firearm on the premises of WSI Enterprises Inc. is strictly and absolutely prohibited. This prohibition expressly includes those persons licensed to carry concealed firearms (other than those who are licensed peace officers). For purposes of this policy, the premises of WSI Enterprises Inc. are defined as any property, building, or portion of a building or property that WSI Enterprises Inc. owns or occupies, whether on a temporary or permanent basis, and any off-site premises where WSI Enterprises Inc. is conducting any work-related business. This includes all parking lots, parking areas, sidewalks, and walkways, and all WSI Enterprises Inc. owned-leased vehicles and equipment. Any person violating this policy will be required to leave WSI Enterprises Inc. premises immediately. Any employee found to be in violation of this policy will be subject to disciplinary action up to, and including, immediate termination.



MEDICAL EMERGENCY PLAN

Life threatening injury or illness: Call 911

- Unconscious
- Not breathing
- Severe bleeding

Directing ambulance services: Post an employee(s) at key points to direct ambulance services to the injured employee's location. A member of the department should accompany the person being treated. This person should report back to the department head and or _____ phone number _____, concerning the status of the employee being transported.

Serious injury: Transport victim to Reliance Medical (Farmington) or Legacy Medical (Hobbs)

- Concussion
- Fracture
- Burns or scald
- Cut, laceration, puncture requiring suturing

In Farmington, visit Reliance Medical Group at 3451 N Butler Ave, Farmington, NM 87401. They can be reached by phone at (505) 565-1915. In Hobbs, visit Legacy Medical Services at 1900 N Dal Paso St, Hobbs, NM 88240. They can be reached by phone at (575) 964-8550. See maps on following page.

Minor injuries: Treat with first aid kit

- Minor cuts
- Minor abrasions
- Minor burns
- Provide total care for those injuries clearly within your capability to handle. All questionable cases should be referred to the company health care provider, or local emergency care.

Report all accidents to the HSE Coordinator at 505-326-0308 and your immediate supervisor.

Emergency contact information

WSI Farmington		(505) 326-0308
WSI Hobbs		(575) 391-8100
Nathan Duran	Farmington District Manager	(970) 342-7544
Gabe Salazar	Hobbs District Manager	(505) 801-9784
Alex Gonzales	Hobbs Field Supervisor	(575) 964-3127
Marianne Keck-Lopez	Chief Financial Officer	(505) 330-7134

The above contact list is to be used to notify management. In the event of a life-threatening situation, dial 911 first and then contact a WSI manager.

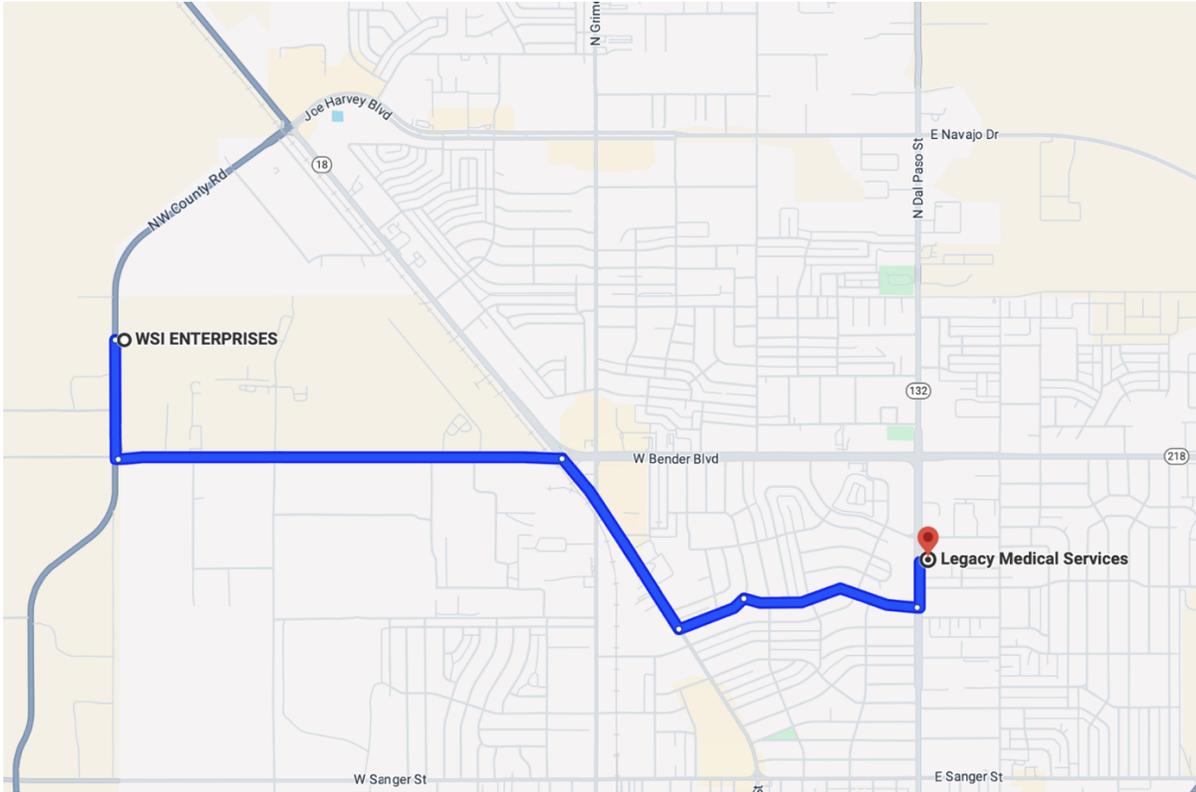
Any employee who needs to see a doctor for a work-related incident or injury, unless it is an emergency, must contact their supervisor, HSE Coordinator or Chief Executive Officer. Employees will be accompanied to Reliance Medical or Legacy Medical. Treatment for any work injuries will be treated at these locations, who are now our preferred medical care providers. No employee should go to their personal doctor or to the hospital for a work-related issue without prior approval.

Hobbs

Legacy Medical Services

1900 N Dal Paso St, Hobbs, NM 88240

(575) 964-8550

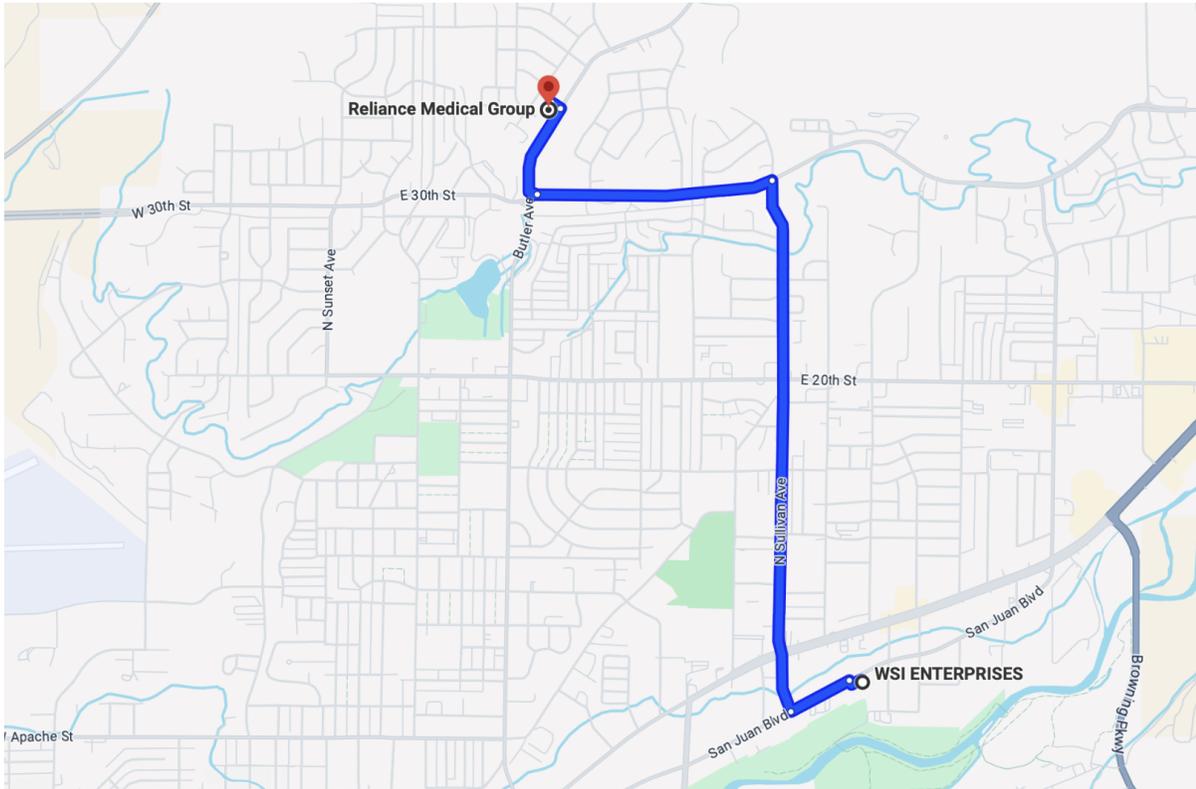


Farmington

Reliance Medical Group

3451 N Butler Ave, Farmington, NM 87401

(505) 565-1915





SHORT SERVICE EMPLOYEE POLICY

The purpose of this Short-Service Employee (SSE) policy (also described as New-on-Job) is to ensure that employees with less than six (6) months oilfield experience are identified, adequately supervised, trained and managed so as to prevent injury to themselves or others, property damage or environmental harm.

Any employee with less than six (6) months service in the same job/position with his/her present employer will be considered a Short-Service Employee (SSE), experienced employees who are new to a position that have more than six (6) months oilfield experience will be considered for inclusion in the SSE BLUE hard hat program based on the specifics of their assignment. Factors to consider include significant differences in:

- Job responsibilities/duties from previous assignments/employers
- Work processes/practices from previous assignments/employers
- Equipment/tools from previous assignments/employers
- Skill level, familiarity with co-workers

Applicable company policies shall be discussed during the orientation. Following the orientation, the SSE employee will be required to sign a form evidencing the training topics covered.

SSE personnel with more than 6 months oilfield experience and less than 6 months with WSI will be identified by wearing a BLUE hard hat that will be issued through HSE.

SSE personnel with less than 6 months oilfield experience and less than 6 months with WSI will be identified by wearing a GREEN hard hat that will be issued through HSE.



CELL PHONE USE AND DRIVING POLICY

Cell phone use while driving should always be avoided. When required to use a cell phone while driving, pull off the road in a legal manner and park where your vehicle will not interfere with traffic, road construction or pedestrians. If the use of a cell phone is required while driving, the following guidelines must be observed.

Cell phone guidelines

Suspend conversations during hazardous driving conditions or situations

Let the person you are speaking with know you are driving. If necessary, suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow, and ice can be hazardous, but heavy traffic can be just as dangerous. As a driver your first responsibility is to pay attention to the road.

Get to know your cell phone and its features, such as speed dial and redial

Carefully read your instruction manual and learn to take advantage of valuable features most cell phones offer, including automatic redial and memory. Also, work to memorize the phone keypad so you can use the speed dial function without taking your attention off the road.

When available, use a hands-free device

Several hands-free cell phone accessories are readily available today. Whether you choose an installed mounted device for your cell phone or a speaker phone accessory, take advantage of these devices if available to you.

Position your cell phone within easy reach

Place your cell phone within easy reach and where you can grab it without taking your eyes off the road. If you receive a call at an inconvenient time, if possible, let your voice mail answer it for you.

Do not take notes or look up phone numbers while driving

If you are reading an address book or business card, or writing while driving a vehicle, you are not watching where you are going. Don't get caught in a dangerous situation because you're reading or writing and not paying attention to the road or nearby vehicles.

Do not engage in stressful or emotional conversations that may be distracting

Stressful or emotional conversations and driving do not mix - they are distracting and even dangerous when you're behind the wheel of a vehicle. Make people you are talking with aware you are driving and, if necessary, suspend conversations which have the potential to divert your attention from the road.

Do not text and drive

Never attempt to text and drive a vehicle at the same time. Pull off the road to a safe location and complete your text message. Texting while driving is a major contribution to distracted driving and contributes to many driving incidents.



SUBSTANCE ABUSE SCREENING CONSENT AND RELEASE

I, the undersigned, an applicant for employment with, or an existing employee employed by WSI Enterprises, Inc. hereby voluntarily consent to the observed taking of specimens for substance abuse screening as a condition of my initial and/or continued employment with WSI Enterprises Inc. I authorize the release of all results of such screening to WSI Enterprises Inc.

I release WSI Enterprises Inc, the testing laboratory, its physicians, nurses, technicians and any other employees or agents involved with my tests from all liabilities, claims or causes of action relating to such substance abuse screening including, without limitation, those that may result from administering such tests and/or the disclosure of test results.

I understand and voluntarily agree that if WSI Enterprises Inc. asks me to, I will submit to substance abuse screening. I understand that either refusal to submit to the substance abuse screen or a positive result may result in revocation of a conditional offer of employment, or termination of my employment, as applicable.

In the case of a breath alcohol test, I understand and agree that if the breath alcohol test level as determined by the test reflects an illegal level of intoxication, I will be unable to operate a motor vehicle and must use an alternate form of transportation operated by someone other than myself. If I refuse alternative transportation, I understand and agree that law enforcement officials will be notified.

Various forms of substance abuse testing

Post accident testing

Testing of an employee who is involved in an on-the-job accident (vehicular or otherwise) which may have involved human error and may have caused a fatality, serious injury, or significant property damage.

Pre-employment testing

A candidate for employment must pass the drug and/or alcohol test as a condition of employment. Testing can be performed as part of the application process 1) before an offer of employment is made, or 2) as a part of the hiring process after an offer of employment is made, but before the employee commences work.

Random testing

The testing of employees who are chosen on a "neutral selection" basis without advance notice. True random testing is conducted by pooling a selected number determined by the client from the total number of qualified participants' numbers in the random pool. Random testing of employees may also be required by the Company's clients and such client may notify the Company for testing of the employee.

Return to duty testing

Employees returning from a leave of absence for sickness or injury exceeding a given number of days can be required to submit and successfully pass a drug and/or alcohol test as a condition of reinstatement.

Reasonable suspicion and cause testing

The "cause" required is an objective, factual, individualized basis for testing, such as when an employee's observed behavior or physical appearance suggests drug and/or alcohol use or possession of drugs and/or alcohol.

A signed copy of the Substance Abuse Screening Consent and Release is in HR File



FIELD PERSONNEL CHECK-IN / CHECK-OUT PROCEDURE

The purpose of this policy is to establish a procedure to ensure WSI personnel return safely home at the end of each working shift. It is a requirement that any time an individual or individuals are working in the field, they should have a telephone or communication equipment that ensures communication is available. This policy applies to lone workers as well as to multiple employees working together.

Note: There are areas in the San Juan Basin and Permian Basin that prevent constant communication. All personnel need to make themselves aware of these areas and make contact prior to entering and upon exiting.

Procedures

1. When employees go to the field prior to or after normal working hours they are required to contact the on-call supervisor. Upon leaving town for the job site, the employee shall call or text the on-call supervisor stating they are headed toward the work location along with an estimated job completion time.
2. If job conditions change and the job completion time is extended more than two hours beyond the original estimate the employee is required to call the on-call supervisor and give them an update.
3. The on-call supervisor will allow an additional two hours from estimated time frames received from employees before attempting to contact the employee(s) on call. This two-hour grace period allows for unforeseen travel interruptions or road conditions. The on-call supervisor can track company vehicle location via GPS, which may be operable in the vehicle.
4. When the job been completed, and the employee is ready to return to town they will call or text the on-call supervisor and inform them. In addition, the employee will provide the on-call supervisor with an estimated arrival time back to his / her office or home. Upon arrival at the office or home the employee with call the on-call supervisor and inform them they have safely arrived.
5. During normal working hours this same communication shall be held with WSI office personnel. If two employees are traveling together only one call/text needs to be made. If two employees are working together but traveling separately both must call in.



SUBCONTRACTOR POLICY

The purpose of this policy is to provide guidance in utilizing subcontractors. WSI is committed to a workplace free from recognized hazards so all workers whether employees of WSI or its sub-contractors shall.

It is the policy of WSI that all subcontractors working for WSI whether in the shop or on our client's property shall meet all WSI's safety requirements. Those shall be following OSHA, EPA and DOT and any other state or federal regulations. If one of WSI's clients has specific Safety and Health beyond the base requirements, then those requirements shall be met.

Training

All employees shall be trained and be made aware of the program goal. A review of the program's effectiveness shall be performed by management at least annually or sooner if changes need to be made. This training will occur annually and be a part of the New Employee Orientation and shall include all new employees regardless of position. Training shall include program benefits/limitations and effectiveness.

Individual departments, as well as the company, will compare these measurements and track these results by an acceptable method so that numerical and statistical comparisons can be made over time to assure sub-contractor compliance.



GENERAL SAFETY POLICIES AND PROCEDURES

This Corporate General Safety Policies and Procedures Plan summarizes information regarding safety policies and procedures at WSI. The Program Administrator is responsible for implementing and updating this Plan. The Plan is kept at WSI Corporate office.

This general company safety philosophy has been developed to reflect and communicate the proactive safety attitude maintained at WSI. The company will comply with appropriate safety and environmental laws and regulations such as:

- The Occupational Safety and Health Act (OSHA)
- The EPA (Environmental Protection Agency)
- The DOT (Department of Transportation)
- All other applicable federal, state, and local safety and health regulations

The topics covered in written safety programs at WSI include the following:

- WSI Safety Program
- Corporate Safety Policies and Procedures Program
- New Employee Orientation Program
- Defensive Driving Program
- Accident Reporting and Investigation Program
- Medical Services and First Aid Program
- Blood borne Pathogens Exposure Program
- Personal Protection Equipment Program
- Fire Protection Program
- Respiratory Protection Program
- Lockout/Tagout Program
- Confined Space Entry Program
- Hazard Communication Program
- Electrical Safety Program
- Hearing Protection Program
- Fall Protection Program
- Welding, Cutting, Hot work Program
- Hydrogen Sulfide Program
- Assured Equipment Grounding Conductor Program
- Trenching And Excavation Program

Employer and employee responsibilities

This section lists responsibilities of employers and employees. These responsibilities are always to be taken seriously. It is the policy of WSI to provide a place of employment reasonably free from hazards, which may cause illness, injury, or death to associates. It is also company policy to establish an effective and continuous safety program incorporating educational and monitoring procedures maintained to teach safety, correct deficiencies, and provide a safe, clean working environment.

It is the policy of WSI that inspections of job sites should occur at least monthly, be documented and if problems are noted then these should be discussed with the entire workforce at the next monthly safety meeting. It is the policy of WSI that the use of any machinery, tool, material, or equipment which is not in compliance with any applicable requirement is prohibited.

Accident prevention responsibilities

It shall be the responsibility of WSI to initiate and maintain such programs as may be necessary to comply with this part. Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by management. WSI shall permit only those employees qualified by training or experience to operate equipment and machinery. WSI shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury. Employees required to handle/use poisons, caustics, and other harmful substances shall be instructed regarding the safe handling and use, and made aware of the potential hazards, personal hygiene, and protective measures required.

All management employees are responsible for the enforcement of safety policies and practices to ensure:

- Staff are trained in appropriate safety procedures, including chemical-specific training as required.
- Individual safety files are maintained for all employees.
- The Program Administrator is notified, and necessary forms are completed if an accident or work-related health problem occurs.
- Equipment/property within their area of responsibility is maintained in a safe, hazard-free condition.

Employees have a responsibility to themselves and to the company for their safety and the safety of coworkers. All employees are required to:

- Comply with all federal, state, and local rules and regulations relevant to their work.
- Observe all company rules/regulations related to the efficient and safe performance of their work.
- Integrate safety into each job function and live by this philosophy in the performance of job duties.
- Report or correct unsafe equipment and practices.
- Report any accidents that occur while on the job.

Disciplinary policy

This section discusses the disciplinary policy for management and employees. This policy is always to be taken seriously. All management employees are responsible for the enforcement of safety policies and practices. Lack of commitment by a member of management will be dealt with in the same fashion as indicated below for safety infractions.

Violation of company safety policies or practices will not be tolerated. Violation of company safety policies or practices may be cause for an investigation and may lead to disciplinary action being taken up to and including termination. If the employee is found to be at fault, the severity of the penalty will be in direct correlation to the severity of the safety violation. The list of possible disciplinary actions includes:

- Verbal reprimand: An informal discussion of incorrect behavior that should take place as soon as possible after the supervisor has knowledge of the safety misconduct.
- Written reprimand: A written form documenting the safety misconduct, to be presented to the employee and placed in the employee's personnel file.
- Warning of probation: A written form documenting the safety misconduct and warning the employee that another incident will lead to probation, to be presented to the employee and placed in their file.
- Probation: A trial period during which the employee is given specific rules and goals to meet, during which, if he or she cannot meet the rules and goals, he or she is subject to termination.
- Warning of suspension: A written form documenting the safety misconduct and warning the employee that another incident will lead to suspension, to be presented to the employee and placed in the employee's personnel file.
- Suspension: A period during which the employee is not allowed to work and during which the employee is not paid.
- Dismissal or termination of employment: The permanent separation of an employee from the company, initiated for disciplinary reasons for safety misconduct.

All documentation required in this section will be kept at the WSI office.



LADDER POLICY

This policy outlines the safe use and storage of portable ladders. All employees shall have proper training prior to working with a ladder that will include inspection, selection, and use. Ladder must be used as a ladder and for no other purpose. Ladders shall be inspected by a competent person monthly and prior to each use by the employee and must be load rated displaying the rating.

Portable ladder safety rules

1. Portable ladders can be used for safe access to elevations not provided with permanent stairways, ladders, or ramps. All rungs must be evenly spaced.
2. Faulty ladders (broken, split, or missing rungs, side rails, or other defects) shall be immediately tagged and removed from service.
3. Portable ladders shall be placed on a substantial base, with the area around the top and bottom of ladder kept clear.
4. Unless protected by barricades or guards, ladders must not be placed in passageways, doorways, driveways, or any location where they could be accidentally displaced.
5. All portable ladders shall be tied, blocked, or secured to prevent movement.
6. Metal ladders shall not be used where possible electrical contact can be made.
7. All company ladders shall be marked 'WSI' for identification.
8. All ladders will be stored when not in use.
9. All ladders must be inspected prior to each use.
10. Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.
11. Do not stand on the top two rungs of a step ladder,
12. Employees must be facing the ladder when ascending or descending.
13. Instruct employees to not carry objects that could cause injury in the event of a fall.
14. Ladder shall be rated for the task at hand.
15. Shall be used for its intended purpose.
16. Shall state that ladder rungs, cleats, and steps shall be parallel, level and uniformly spaced when the ladder is in position for use.
17. Shall state that ladders are visually inspected periodically. Program shall state that defective ladders are tagged and withdrawn from service.
18. Shall state that safety practices are included in the program as detailed in the additional comments: 1) Ladders shall be used only on stable and level surfaces. 2) The top or top step of a stepladder shall not be used as a step. 3) An employee shall not carry any object or load that could cause the employee to lose balance and fall. 4) When ascending or descending a ladder, the user shall face the ladder.
19. Shall state that ladder side rails shall extend at least 3 feet above the upper landing surface. The program shall state that extension ladders are placed at a 4:1 ratio.
20. Shall state that ladders shall not be loaded beyond the maximum intended load for which they were built, nor beyond the manufacturer's rated capacity.
21. Shall state that ladders only be used for the purpose for which they were designed.

Requirements

Extension ladders

- Portable ladders must be placed so that the horizontal projection is not greater than 1/4 of the vertical projection. (Four foot up, one foot out {4 to 1 ratio}).
- Side rails of extension ladders must extend thirty-six (36) inches above landings. If this is not possible, grab rails shall be provided.

- Double-cleat ladders shall not exceed twenty-four (24) feet in length. Single cleat ladders shall not exceed thirty (30) feet (based on top landing). If additional length is required, two (2) or more separate ladders shall be used and offset with a platform between each ladder. Guardrails and toe-boards shall be erected on the exposed side of the platform.

Step ladders

- Planks shall not be placed on the top step of stepladders.
- No one shall be permitted to stand and work on the top two (2) steps of a stepladder.

Project made ladders

- Job-made ladders shall be constructed for intended use. If a ladder is to provide the only means of access or exit from a working area for twenty-five (25) or more employees, or simultaneous two-way traffic is expected, a double-cleat ladder shall be installed.
- Side rails of job-made ladders shall be continuous, and two (2) inch x four (4) inch lumber shall be used for single-cleat ladders up to 16 feet long, 3 inch x 6 inch lumber for single-cleat ladders from sixteen (16) feet to thirty (30) feet long; two (2) inch x four (4) inch lumber shall be used for double-cleat ladders from twelve (12) feet to twenty-four (24) feet long. Cleats shall be inset into the edges of side rails one half (1/2) inch, or filler block shall be used on the rails between the cleats. The cleats shall be secured to each rail with three (3) No. 10d common wire nails or other fasteners of equivalent strength. Cleats shall be uniformly spaced twelve (12) inches, from the center, top to bottom.

Rung ladders

- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, or meet OSHA/ANSI specifications when the ladder is in position for use.

References: 29 CFR 1926.1050, 29 CFR 1926.1053, and 29 CFR 1926.1060



WRITTEN HAZARD COMMUNICATION PROGRAM

WSI has developed a written program to establish procedures for working with and handling hazardous chemical substances. This program supports compliance with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard as found in 29 CFR 1910.1200. This program applies to all company employees.

Program

Overview of hazard communication program

General policies of the program include the following, in addition to the below:

- WSI shall maintain a list of hazardous chemicals on the job site.
- WSI shall specify methods to be used to inform employees of the hazards of non-routine tasks.
- WSI shall address multi-employer job sites and/or multi work sites.
- WSI shall address the use & care of labels and other forms of warning and ensure that the labels are not to be defaced or removed.
- WSI shall specify methods used to address the appropriate hazard warnings such as words, pictures, symbols, or combinations thereof. (Examples of labeling systems might include DOT & Pictograms)
- All hazard communications shall be in English.

Chemical inventory and container labeling

A list of hazardous chemicals that workers may be exposed to during normal work procedures or in the event of an emergency such as leaks and spills shall be maintained. A copy of this list is included as an attachment to this plan. This chemical inventory shall be cross-referenced to Safety Data Sheets (SDS) that WSI maintains at its shop facility. In addition:

- It is the policy of WSI that no container of hazardous substances will be released for use until the following information is verified: (a) containers are clearly labeled as to the contents, (b) appropriate hazard warnings are noted, and (c) name and address of the manufacturer are listed.
- This responsibility has been assigned to the Program Administrator. To help ensure that employees are aware of the hazards of material used in their work areas, it is our policy to label all secondary containers. The supervisor in each department will help ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with generic labels, which have a block for identity and blocks for the hazard warning.
- Information and labels shall be made available in the appropriate language for non-English speaking employees. Labels used by WSI will be in the NFPA 704 format, unless a container is received with existing labels that can be utilized. The NFPA 704 system uses a consistent color coding in the shape of a diamond, the left side of the diamond is for health hazards and is colored in blue, the top part of the diamond is for fire hazards and is red in color, the right side of the diamond is yellow in color and denotes reactivity hazards, the lower part of the diamond is white in color and is reserved for special hazards such as corrosives, acids, no water application, etc.

Safety data sheets (SDS)

Safety Data Sheets (SDS's) must be obtained for each required chemical from the chemical manufacturer, supplier, or vendor. Safety Data Sheets (SDS's) are to be maintained in a readily accessible location to employees. In addition:

- Copies of SDS for hazardous substances to which employees may be exposed are kept at the WSI, shop. The Program Administrator will be responsible for obtaining and maintaining the data sheet system for the company.
- The Program Administrator will review incoming data sheets for new and significant health and safety information. The Program Administrator will see that any new information is passed on to the

affected employees. SDS's and new information is passed on to host employers as well as other contractors on a work site that may come in contact with the hazardous substance.

- The Program Administrator or designee will review each SDS for completeness. If an SDS is missing or obviously incomplete, a new SDS will be requested from the manufacturer. SDS are available to employees in their work area for review during each work shift. Should an SDS not be available, or a new chemical has been purchased without an SDS, please contact your supervisor or the Program Administrator immediately.

Employee information and training

All new employees will be expected to attend a health and safety orientation. Safety meetings will be held before new hazardous substances are introduced. Your supervisor will review the items below as they relate to the new material in your work area. Posters showing DOT hazard labels with examples are posted in various work locations. Info/training will be provided on the following:

- An overview of the requirements contained in the Hazard Communication Regulation, including their rights under the Regulation.
- Notification about the hazardous chemicals present in the employee's work area.
- How to read labels and review SDS to obtain appropriate hazard information.
- The physical and health effects of the hazardous materials on the inventory list of this plan, including symptoms of overexposure.
- How to determine the presence or release of hazardous chemicals in the work area.
- How to lessen or prevent exposure to these hazardous substances through usage of control, work practices and personal protective equipment.
- Steps taken by WSI to lessen or prevent exposure to the chemicals listed on the inventory list.
- Emergency procedures to follow if exposed to any chemicals.
- Location and availability of the written Hazard Communication Program and SDS.
- Location of the hazardous chemical inventory list.

Hazardous substances

Information on all hazardous substances for WSI can be found in the SDS books.

Hazardous non-routine tasks

Periodically, employees are required to perform 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. This information will include:

- Specific hazards.
- Protective/safety measures that must be utilized.
- Measures the company has taken to help lessen the hazards including ventilation, respirators, presence of another employee and emergency procedures.

Informing contractors

To help ensure that outside contractors work safely in your place of business, it is the responsibility of the Program Administrator to provide contractors the following information:

- Hazardous substances to which they may be exposed while on the jobsite.
- Precautions the contractors may take to help lessen the possibility of exposure by usage of appropriate protective measures.
- If anyone has questions or suggestions about this plan, contact the Program Administrator.

Plan monitoring

The Program Administrator will monitor and document the plan for effectiveness at least annually and more frequently if there are indications of problems with the plan.



HAND AND POWER TOOL POLICY

This policy outlines the safe use, care, and maintenance of hand and power tools. All hand and power tools and similar equipment, whether furnished by WSI or the employee, shall be maintained in a safe condition. All hand-held power tools shall be equipped with a constant pressure switch that will shut off the power when the pressure is released. This does not apply to bench mounted tools. Tools requiring guarding must have guards in place prior to operation. Defective or unsafe tools shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from their place of operation.

All hand and power tools be maintained in a safe condition. Guards and guarding shall be in place while the tool is in use. Proper PPE shall be provided for using hand and power tools. The use of any tool which is not in compliance with any applicable requirement is prohibited. Any tools that are not in compliance with any applicable requirement shall be identified as unsafe by tagging or locking the controls to render them inoperable.

Requirements

Hand tools

- Wrenches, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.
- Impact tools, such as drift pins, wedges, and chisels, shall be kept free from mushroomed heads.
- Wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.
- Tools shall not be used beyond their rated capacity.
- Handmade/homemade extension handles (cheaters) are not to be used.
- Proper PPE must be used when work applications require it.

Electric power tools

- Electric power operated tools shall either be of the approved double insulated type or grounded.
- The use of electric cords for hoisting or lowering tools shall not be permitted.
- Floor and bench mounted grinders shall be provided with work rests which are rigidly supported and readily adjustable. Work rests shall be kept at a distance not to exceed one-eighth inch from the surface of the wheel.

Fuel powered tools

- Fuel powered tools shall be stopped while being refueled, serviced, or maintained.
- If using fuel powered tools in enclosed spaces the confined space standards may apply

Pneumatic power tools

- Use of compressed air except where automatic shutoff valves are used, safety chains, clips, whip-checks or other suitable locking devices shall be used at hose to machines, hose to hose, and hose to tool connections of high-pressure hose lines.
- At no time shall compressed air be directed toward a person. Compressed air shall not be used for cleaning purposes except when reduced to less than thirty (30) pounds per square inch (psi).
- The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- Safety clips or retainers for tools shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally released.
- Pneumatic hand tools shall be disconnected from the power source and pressure in hose lines shall be released before any adjustment or repair to the tools are made.

Powder actuated tools

- Only employees who have been trained and certified in the operation of the tool in use shall be allowed to operate a powder-actuated tool. The powder actuated tool manufacturer representative will normally train employees.
- The tool shall be tested each day before loading to see that safety devices are in proper working condition. The method of testing shall be in accordance with the manufacturer's recommended procedure.
- Any tool found not in proper working order, or that develops a defect during use, shall be immediately removed from service and not be used until properly repaired.
- Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any employee.

Abrasive blasting

- A competent person will assess what type hazards exist from the surface coating of material to be blasted. From this assessment and additional testing if required, the composition and toxicity of the dust from those sources will be determined. From this determination the competent person will decide what respiratory equipment and blasting agents to use to minimize the hazards involved.
- The concentration of the dust/fumes in the breathing area of the abrasive blasting operator, or any other worker shall be maintained below ten (10) milligrams per cubic meter.
- Silica sand will not be used when other material is available.
- The abrasive blast area shall be barricaded for fifty (50) feet, with signs posted stating, "ABRASIVE BLASTING-DO NOT ENTER".
- The blast nozzle shall be bonded to prevent build-up of static electricity.
- Hose couplings shall be made of metal and secured to the outside of the hose to prevent erosion and weakening of the couplings. Nozzle fittings must be made of metal and fit onto the hose externally. A dead man control must be provided either to cut off the air flow, or to signal the pot tender to cut it off. The pot tender shall be available to always respond.
- The blast operator shall be provided with a supplied air hood respirator providing a steady flow of class "D" or better breathing air. Other compressed air may be used if a trap and carbon filter are installed and regularly maintained. A valve shall be installed to reduce the pressure down to requirements of the respirator in use.
- Blast operators shall be equipped with heavy canvas or leather gloves and aprons, or equivalent protection.
- Project management may determine that abrasive blasting operations be conducted after normal hours when a minimum number of employees are present in the work area.
- Aisles and walkways should be kept clear of shot or similar abrasives.
- All WSI employees involved in abrasive blasting operations shall receive respirator training in compliance with current regulations. Those selected to use the abrasive blasting equipment and material will receive training in its use, maintenance, and hazards involved.

References: 29 CFR 1910.94 and 29 CFR 1910.134



FALL PROTECTION PROGRAM

It is the policy of WSI to take all practical measures possible to prevent employees from being injured by falls from heights or from the same level. We will take necessary steps to eliminate, prevent, and control fall hazards. We will comply fully with the OSHA Fall Protection standard (CFR 1926, Subpart M, Fall Protection). This policy will follow the OSHA standard for potential falls from heights of at least 6 feet. First consideration will be given to the elimination of fall hazards. If a fall hazard cannot be eliminated, effective fall protection will be planned, implemented, and monitored to control the risks of injury due to falling.

Fall protection equipment will be provided and its use required by all employees. Foremen will be responsible for implementation of a fall protection plan for their jobsite. WSI shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

All personnel exposed to potential falls from heights will be trained to minimize the exposures. Qualifications of the person or position that prepares programs shall be evaluated and kept on file. When applicable, a person or position designated by the competent person shall be assigned to monitor the safety of other employees and list the duties of this person as detailed in additional comments. A competent person will be assigned to:

- Recognize fall hazards.
- Warn employees if they are unaware of a fall hazard or is acting in an unsafe manner. 3. Be on the same working surface and in visual sight.
- Stay close enough for verbal communication.
- Not have other assignments that would take monitor's attention from the monitoring function. (If controlled access zones are not utilized, please state within safety manual.)

In the event an employee falls or some other serious incident occurs, WSI shall investigate the circumstances of the fall or other incident to determine if the fall protection plan needs to be changed and shall implement those changes to prevent similar types of falls or incidents.

Fall protection shall be provided for employees at all heights of six feet or greater. All fall protection equipment will meet the requirements of applicable ANSI, ASTM, or OSHA requirements. If a fall were to occur, prompt rescue of employee shall take place and be within 6 minutes of the fall.

Fall hazard identification and evaluation

The foreman on each jobsite will be responsible for identifying fall hazards on their jobsite. The foreman will evaluate each situation or work procedure where employees may be exposed to a fall of 6 feet or more. The foreman will be responsible for developing a plan to eliminate the exposures, if possible, or to select the appropriate fall protection systems and/or equipment.

The following are examples of situations where fall protection would be needed. This listing is by no means complete, and there are many other situations where a fall of 6 feet or more is possible. It should be noted that ladders and scaffolding are not included in this list because they are covered by other OSHA standards and other requirements of our safety program.

Wall openings

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface must be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

Holes

Personal fall arrest system, covers, or guardrail systems shall be erected around holes (including skylights) that are more than 6 feet above lower levels.

Portable ladders

All portable ladders must be rated for the weight of the user. Ladders must be non-conductive and have all evenly spaced rungs. Ladders must be inspected prior to each use. If a ladder is found defective, damaged or does not have warning and ratings posted, then the ladder must not be used, and it must be tagged and taken out of service. Training in ladder safety shall be documented and discussion items must always include 3-point contact while movement occurs. The ladder must extend at least 3 feet above the landing surface and the ladder position must be at a 4:1 ratio in ladder placement. The ladder must be used for this intended purpose only and not used for anything else.

Leading edge

Each employee who is constructing a leading edge 6 feet or more above lower levels shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

Excavations

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling by guardrail systems, fences, barricades, or covers. Where walkways are provided to permit employees to cross over excavations, guardrails are required on the walkway if it is 6 feet or more above the excavation.

Formwork and reinforcing steel

For employees, while moving vertically and/or horizontally on the vertical face of rebar assemblies built in place, fall protection is not required when employees are moving. OSHA considers the multiple hand hold footholds on rebar assemblies as providing similar protection as that provided by a fixed ladder. Consequently, no fall protection is necessary while moving point to point for heights below 24 feet. An employee must be provided with fall protection when climbing or otherwise moving at a height more than 24 feet, the same as for fixed ladders.

Hoist areas

Each employee using ramps, runways, and other walkways shall be protected from falling 6 feet or more by guardrail systems.

Low-slope roofs

Each employee engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 ft or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or a combination of a warning line and guardrail system, warning line and safety net system, warning line and personal fall arrest system, or warning line and safety monitoring system. On roofs 50 ft or less, the use of a safety monitoring system without a warning line is permitted.

Steep roofs

Each employee on a steep roof with unprotected sides and edges 6 feet or more above lower levels shall be protected by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.

Controlled access zones

A controlled access zone is a work area designated and clearly marked in which certain types of work (such as overhand bricklaying) may take place without the use of conventional fall protection systems-guardrail, personal arrest, or safety net-to protect the employees working in the zone:

- Controlled access zones are used to keep out workers other than those authorized to enter work areas from which guardrails have been removed. Where there are no guardrails, masons are the only workers allowed in controlled access zones.
- Flagged or otherwise clearly marked at not more than 6-foot intervals with high visibility material.
- Rugged/supported in such a way that the lowest point (with sag) is not less than 39 inches from the walking/working surface and the highest point is not more than 45 inches-nor more than 50 inches when overhand bricklaying operations are being performed-from the walking/working surface.

- On floors and roofs where guardrail systems are in place but need to be removed to allow overhand bricklaying work or leading-edge work to take place, only that portion of the guardrail necessary to accomplish that day's work shall be removed.
- Fall Protection Systems will be designed to meet ANSI and ASTM requirements. Purchased equipment and/or raw materials to be used in a fall protection system must meet these requirements. When there is a potential fall of 6 feet or more, we will utilize one or more of the following means of protection.

Guardrail systems

All safety guardrail systems must meet the following criteria:

- Top rails and midrails of guardrail systems must be at least one-quarter inch nominal diameter or thickness to prevent cuts and laceration. If wire rope is used for top rails, it must be flagged at not more than 6 feet intervals with high-visibility material. Steel and plastic banding cannot be used as top rails or midrails. Manila, plastic, or synthetic rope used for top rails or midrails must be inspected as frequently as necessary to ensure strength and stability.
- The top edge height of top rails, or (equivalent) guardrails must be 42 inches plus or minus 3 inches, above the walking\working level. When worker is using stilts, the top edge height of the top rail, or equivalent member, must be increased an amount equal to the height of the stilts.
- Screens, mid-rails, mesh, intermediate vertical members, or equivalent intermediate structural member must be installed between the top edge of the guardrail system and the walking\working surface when there are no walls or parapet walls at least 21 inches high. When midrails are used, they must be installed at a height midway between the top edge of the guardrail system and the walking\working level. When screens and mesh are used, they must extend from the top rail to the walking/working level and along the entire opening between top rail supports. Intermediate members, such as balusters, when used between posts, shall not be more than 19 inches apart.
- Other structural members, such as additional midrails and architectural panels, shall be installed so that there are no openings in the guardrail system more than 19 inches.
- The guardrail system must be capable of withstanding a force of at least 200 pounds applied within 2 inches of the top edge in any outward or downward direction. When the 200-pound test is applied in a downward direction, the top edge of the guardrail must not deflect to a height less than 39 inches above the walking-working level.
- Midrails, screens, mesh intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding a force of at least 150 pounds applied in any downward or outward direction at any point along the midrails or other member.
- Guardrail systems shall be surfaced to protect workers from punctures or lacerations and to prevent clothing from snagging.
- The ends of top rails and midrails must not overhang terminal post, except where such overhang does not constitute a projection hazard.
- When guardrail systems are used at hoisting areas, a chain, gate, or removable guard rail must be placed across the access opening between guardrail sections when hoisting operations are inactive.
- At holes, guardrail systems must be set up on all unprotected sides or edges. When holes are used for the passage of materials, the hole shall have not more than two sides with removable guardrail sections. When the hole is not in use, it must be covered or provided with guardrails along all unprotected sides or edges.
- If guardrail systems are used around holes that are access points (such as ladder ways), gates must be used, or the point of access must be offset to prevent accidental walking into the hole.
- If guardrails are used at unprotected sides or edges of ramps and runways, they must be erected on each unprotected side or edge.

Personal fall arrest systems

These consist of an anchorage, connectors, and a body belt or body harness and may include a deceleration device, lifeline, or suitable combinations. If a personal fall arrest system is used for fall protection; it must do the following:

- Limit maximum arresting force on an employee to 900 pounds when used with a body belt.
- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness.
- Be rigged so that an employee can neither free fall more than 6 feet nor contact any lower level.

- Bring an employee to a complete stop and limit max deceleration distance of travel to 3.5 feet.
- Have sufficient strength to withstand twice the potential impact energy of an employee falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.
- The use of body belts for fall arrest is prohibited and a full body harness is required.
- Personal fall arrest systems must be inspected prior to each use for wear damage, and other deterioration. Defective components must be removed from service.

Positioning device systems

These body belt or body harness systems are to be set up so that a worker can free fall no farther than 2 feet. They shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3000 pounds, whichever is greater.

Safety monitoring systems

When no other alternative fall protection has been implemented, the employer shall implement a safety monitoring system. WSI will appoint a competent person to monitor the safety of workers and shall ensure that the safety monitor:

- Is competent in the recognition of fall hazards.
- Is capable of warning workers of fall hazard dangers and in detecting unsafe work practices.
- Is operating on the same walking/working surfaces of the workers and can see them.
- Is close enough to work operations to communicate orally with workers and has no other duties to distract from the monitoring function.
- Mechanical equipment shall not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-sloped roofs.
- No worker, other than one engaged in work (on low-sloped roofs) or one covered by a fall protection plan, shall be allowed in where an employee is being protected by a monitoring system.
- All workers in a controlled access zone shall be instructed to promptly comply with fall Hazard warnings issued by safety monitors.

Safety net systems

Safety nets must be installed as close as practicable under the walking/working surface on which employees are working and never more than 30 feet below such levels. Defective nets shall not be used. Safety nets shall be inspected at least once a week for wear, damage, and other deterioration. Safety nets shall be installed with sufficient clearance underneath to prevent contact with the surface or structure below. Items that have fallen into safety nets including-but not restricted to, materials, scrap, equipment, and tools-must be removed as soon as possible and at least before the next work shift.

Warning line systems

Warning line systems consist of ropes, wires, or chains, and supporting stanchions and are set up as follows:

- Flagged at not more than 6-foot intervals with high-visibility material.
- Rigged/supported so that the lowest point with sag is no less than 34 in from the walking/working surface and highest point is no more than 39 in from the walking/working surface.
- Stanchions, after being rigged with warning lines, shall be capable of resisting without tipping over, a force of at least 16 lbs applied horizontally against the stanchion, 30 in above the walking/working surface, perpendicular to the warning line and in the direction of the floor, roof, or platform edge.
- The rope/wire/chain shall have a minimum tensile strength of 500 pounds and after being attached to the stanchions, must support without breaking the load applied to the stanchions as above.
- Shall be attached to each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in the adjacent section before the stanchion tips.
- Warning lines shall be erected around all sides of roof work areas. When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge perpendicular to the direction of mechanical equipment.
- When mechanical equipment is not being used, the warning line must be erected not less than 6 feet from the roof edge.

Covers

All covers located in roadways and vehicular aisles must be able to support at least twice the Maximum axle load of the largest vehicle to which the cover might be subjected. All other covers must be able to support at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time. To prevent accidental displacement resulting from wind, equipment, or workers activities, all covers must be secured. All covers shall be color-coded or bear the markings "HOLE" or "COVER."

Protection from falling objects

When guardrail systems are used to prevent materials from falling from one level to another, any openings must be small enough to prevent passage of potential falling objects. No materials or equipment except masonry and mortar shall be stored within 4 ft of working edges. Excess mortar, broken or scattered masonry, and all other materials and debris shall be kept clear of the working area by regular removal.

During roofing work, materials and equipment shall not be stored within 6 feet of a roof edge unless guardrails are erected at the edge, and materials piled, grouped, or stacked near a roof edge must be stabled and self-supporting.

Training

WSI shall provide a training program for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling & shall train each employee in the procedures to follow to minimize these hazards. Employers are to have written certification records showing the following:

- Who was trained, when, dates of training
- Signature of person providing training & date employer determined training was deemed adequate.

WSI shall provide re-training when the following are noted:

- Deficiencies in training.
- Workplace changes.
- Fall protection systems or equipment changes that render previous training obsolete.

Employees will be trained in the following areas:

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

Accident investigations

Accidents or near misses that involve fall protection systems must be investigated in a timely fashion. Results of the investigation that require program or equipment changes within the fall protection program must be implemented immediately and communicated to affected employees.

All recordkeeping associated with this program shall be maintained at the WSI Office.