

McKinney Drilling Company

Employee Safety Handbook

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McKinney Drilling Company

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This manual is for the employees of the construction divisions and companies of McKinney Drilling Company. For further information pertaining towards the contents of this booklet, contact the Safety Department at (770) 948- 9521.

Revised 8/08

Introduction

Statement of Safety Policy

It is the policy of this company to strive for the highest safety standards on our projects. Safety does not occur by chance. It is the result of careful attention to all company operations by those who are directly and indirectly involved. Employees at all levels must work diligently to execute the company's policy of maintaining safety and occupation health.

Our Injury and Illness Prevention Program has been developed to assure compliance with Federal (including Corps of Engineers), State, OSHA, and local regulations. It is the obligation of all employees to be knowledgeable of the standards established by these agencies, and to implement the rules and regulations contained therein on projects under their direction.

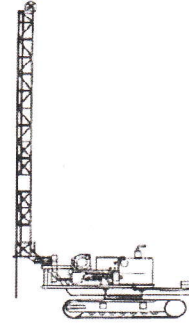
Regard for the safety of the general public, our own employees, and the employees of our subcontractors is a supreme responsibility of all levels of our organization. We intend to prevent any human suffering. Accidents, even minor ones, cause pain, both physical and mental. Prevention of injury and illness is a goal well worthy of achieving.

A safe operation is organized, clean, and efficient. If every employee views accidents in the same way we consider all other aspects of our operations, we will be in a better position not only to control accidents, but also to improve the total performance of our company. It is therefore of utmost importance that all aspects of our safety program be strictly adhered to and that the intent of this program be followed to the letter. Any recommendations to improve our safety program are encouraged.

McKinney Drilling Co.

William Maher
President

General Safety



1. Accidents or injuries, regardless of their nature, shall be reported promptly to your project supervisor. If an injury occurring on the project requires medical attention after regular hours, this information must be reported to your immediate supervisor the next regular work day.
2. Unless life threatening, the medical facility to be used must be chosen from a panel of approved providers or by the Safety Department.
3. All employees must report an unsafe condition or procedure to their immediate supervisor.
4. Set a good example. Demonstrate safety in your work habits and personal conduct. Anticipate hazards which may arise from changes in equipment or methods.
5. Wear your personal protective equipment at all times when on the project.
6. Shirts shall be worn at all times to protect skin from minor burns, abrasions and cuts. Shirts must cover the shoulders. Clothing shall be appropriate for the work being done. Loose or torn clothing may contribute to an accident.
7. Cement burns are a constant hazard. Be sure cement does not get inside your boots or gloves. Use protective barrier hand cream on your hands and wrists. Wash off any cement that gets on you as soon as possible. Use vinegar to neutralize cement burns. Report any burns, no matter how slight, to your supervisor.
8. The use or possession of intoxicating beverages or illegal drugs is strictly prohibited. Driving a company vehicle under the influence of alcohol or illegal drugs is prohibited.
9. The Company has the right to require any employee to submit to a drug test whenever the employee is involved in, or has contributed to, a work-related incident, which involves or could have involved injury to himself and/or any person or damage to property.
10. No employees shall remove, deface, damage, destroy or carry off any safety devices: fire extinguishers, first-aid kits, machine guards, furnished for the project.
11. Toilets or sanitary facilities as provided shall be used by all employees to help maintain sanitary and healthful work environments.
12. Violation of any of the following items may subject you to written reprimand, suspension and possible discharge:
 - Violation of Safety Regulations
 - Violation of McKinney Drilling Company Drug and Alcohol Policy
 - Fighting or provoking a fight
 - Horseplay in any form - scuffling, pranks, wrestling, throwing material at others, etc.
13. The use of Personal Cell Phones during drilled shaft operations is prohibited.
14. Think safety at all times, accidents are caused - they don't just happen.

Injuries and Accidents

1. **All injuries** and near-miss incidents must be reported to your immediate supervisor and a written report of injury completed and submitted to the Safety Department.
2. The project first-aid kit is located in your supervisor's truck or connex/office trailer and is intended for treating minor injuries only.
3. Non-life threatening injuries should be treated by the doctor indicated on the **Emergency Phone Numbers** sheet provided for the project.
4. Life threatening or very seriously injured persons should be taken to the hospital indicated on the **Emergency Phone Numbers** sheet. Call an ambulance if needed or else go to the emergency room of the hospital.
5. Flush the eyes with water a full 15 minutes if a chemical or other liquid has splashed into the eyes before taking the injured person to a doctor. Consult the Material Safety Data Sheet (MSDS) for further treatment.
6. Don't move a person who has fallen, is unconscious or who may have internal injuries. Call for medical help to come to the person.
7. All accidents must be reported to your immediate supervisor. If an accident occurs which could have resulted in injury or property damage, these should also be reported.
8. Equipment failures or malfunctions should be reported so that corrections can be made.

First Aid

1. Normally, employees should not attempt to render first aid to themselves or to other employees.
2. Attempting to aid an injured person could cause further injury, unless you are properly trained.
3. For the average untrained person, the best possible first aid to render is to get qualified help to the scene!
4. All employees are urged to become trained in first aid. In the event of a very serious or even life-threatening situation, certain procedures could be extremely useful. A trained first-aid responder could perform any of the following procedures which could possibly save someone's life.
5. If the injured person is in or near fire or possible explosion, move them to safety immediately, then call for help.
6. If you see a person bleeding profusely, apply pressure to the wound and call for help immediately.
7. If you notice an injured person lying unconscious and turning blue, pinch their nostrils, arch their head and blow air into them. Call for help immediately.
8. If you notice a person fall, get hit on the head, neck or back, do not move the person in any way or let them move themselves. Call for help immediately.
9. Whenever you witness a serious injury or accident, try to remember all facts about the situation. Remain extremely calm. **No matter what** – reassure the person he/she is alright and help is on the way.

Housekeeping

1. Good housekeeping shall be practiced on all projects. Don't block work areas, walkways, aisles, emergency routes, exits and stairs with material, scrap, equipment, tools and debris.
2. Projecting nails shall be turned down or removed from lumber.
3. Clean up all liquid spills immediately or cover with sand or other anti-slip material until the spill can be cleaned.
4. Use waste cans for all general debris. Put oily rags, flammable or combustible waste into covered metal safety cans.
5. Never over-fill trash cans; empty them more often or provide additional cans.
6. Material, equipment and lumber shall be secured where it is possible to be blown from a high place during heavy winds.
7. Material and equipment shall be properly stacked to keep from collapsing.
8. Tools, machinery and unused materials shall be cleaned and placed in proper storage for future use.
9. Work areas shall be kept clean and unobstructed as much as possible during working hours.
10. At the end of the shift or work day, clean, secure and lock equipment and work areas to prevent unauthorized use.

Personal Protective Equipment

1. Your job may require you to wear personal protective equipment. These items will be issued to you to protect your health and safety. The responsibility to wear them is yours. You must also properly maintain them.
2. Hard hats and safety glasses will be worn at all times when on the project.
3. Hearing protection must be worn in designated areas. Generally if you cannot speak in your normal tone at arm's length to your fellow worker, you should wear hearing protection.
4. Proper eye protection must be worn while working with or around chemicals, changing teeth on drilling tools, welding, grinding, splattering, concrete, chipping, etc.
5. Goggles or face shields are always recommended when drilling, burning, chipping, grinding, sawing, grouting and when otherwise required by your supervisor. Welding helmets must be worn by all welders.
6. Respiratory protective devices should be worn in dusty conditions or harmful atmospheres. Only authorized personnel shall be permitted to wear respiratory protection. Determination of the proper respirator will be made only by the Safety Department.
7. Suitable gloves should be worn when handling rough material, debris, lumber, sharp edged material, chemical or hot/cold objects to protect hands from splinters, cuts, abrasions and burns. Be alert for

sharp edges and burrs or material that may be hot from burning, welding, grinding, etc. Ask your supervisor if you are unsure what glove to wear.

- Work boots that are rugged, support the ankle and guard against punctures will be worn. Canvas type shoes, e.g. tennis shoes, are not permitted. Steel-toed safety shoes may be required for some work methods and on some jobs by the Owner; however, they are highly recommended on all projects.
- Fall protection systems will be used at all times when exposed to greater than a (6) six-foot fall exposure. Guardrails or a full body harness and lanyard will be supplied.

Lifting

- Lifting is a part of almost everyone's job, but too often it is done wrong. Result: pulled muscles, slipped discs, hernias.
- Size up the load - get help if you need it.
- Keep your feet apart for balance as well as weight distribution. One foot alongside the object, one foot behind the object.
- Bend at the knees, keeping your back straight, not necessarily vertical. Tuck your chin to keep in line with your neck and spine.
- Get a firm grip on the object with your whole hand (not just your fingers). Draw the object close to you with the weight centered over your feet.
- Tuck your elbows and arms for more power. Lift by straightening your legs - slow, easy motions, avoid quick, jerky motions.
- Avoid shifting with a heavy load. Try to point your foot in the direction you intend to go.
- When lifting above the waist, set the object down on a table or bench (make sure it will support the weight), re-grip, then lift again.
- When carrying a pipe, barstock or other long objects, carry them on your shoulder with the front end high.

Fire Protection and Prevention

- Know the location of fire extinguishers and learn how to use them properly. Know what type of extinguisher to use for the particular fire you anticipate - paper/wood, flammable liquid or electrical fires.
- Report defective fire fighting equipment to your supervisor immediately.
- If you use a fire extinguisher, take it out of service and make it known that a replacement is needed immediately.

Table F-1 FIRE EXTINGUISHERS DATA

CLASSIFICATION	WATER TYPE				FOAM		CARBON DIOXIDE	DRY CHEMICAL				
	STANDARD	CONCENTRATED	WETTING AGENT	SOULACIDE	FOAM	NO	NO	MONOAMMONIUM PHOSPHATE	POTASSIUM BICARBONATE	MULTI-PURPOSE ABC	HALON	
CLASS A WOOD, PAPER, TEXTILE, RAVING, GLIMING EMBERS	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES
CLASS B FLAMMABLE LIQUIDS, GASES, GREASES, OILS	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
CLASS C ELECTRICAL EQUIPMENT	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES
CLASS D COMBUSTIBLE METALS	SPECIAL EXTINGUISHING AGENTS APPROVED BY RECOGNIZED TESTING											
METHOD OF OPERATION	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	WETTING AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE	FULL FRY AGENT SHAKE
RANGE	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40	30 - 40
MAINTENANCE	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY	CHECK OIL LEVEL MONTHLY

4. Combustible material must be kept away from steam lines, radiators, heaters, and hot process and service lines. Combustible material must be removed from welding and burning operations.
5. Orderly work areas, free of trash and scrap, help prevent small fires from becoming large disasters.
6. Equipment should not be refueled while running or when hot.
7. Attach ground wire before starting to refuel when dispensing from one container to another.
8. Smoke in approved smoking areas only. Discard the butts properly. Never drop a smoldering butt. You don't know what may have been spilled in that spot or what kinds of flammable vapors are present.
9. Secure all compressed cylinders in the upright position.
10. Use only approved metal safety containers for storing flammable liquids. If a flammable liquid is spilled, it needs to be cleaned up right away.
11. Combustible waste materials, such as oily rags and paint rags, must be stored in covered metal containers and be disposed of properly.
12. Keep an eye on areas adjacent to burning and cutting operations, have an extinguisher available, cover equipment and remove combustibles.
13. On any enclosed structure, try to establish two separate exit ways. Be sure to keep these exits clean and free of scrap, debris, material and tools.
14. When working in an existing structure, locate and mark all emergency exits. Maintain these exits for proper and easy exit.

Welding and Burning

1. Keep welding leads and burning hoses clear of passageways, exits, stairwells and other high traffic areas.
2. Inspect all leads, grounds, clamps, fittings, couplings, connections, hoses, gauges, cylinders and welding machines each day before using.
3. Be aware of what you are welding or burning. Certain metals, paints, oils and chemicals give off toxic fumes or may be flammable.
4. You must have a charged, working fire extinguisher for your working area. This extinguisher must be readily available for use. Designate someone to keep an eye on adjacent areas for sparks and slag.
5. Maintain good housekeeping about your work area. Do not start welding or burning operations if there is evidence of spills, rags, materials or other flammable objects in or near your work area.
6. Proper personal protective equipment must be worn during all burning and welding operations. These include gloves, apron, hood, safety glasses, hard hat, safety shoes, capes, leggings and ear protection.
7. Protective screens may be necessary in populated work areas to avoid fellow workers from being exposed to flash burns, sparks or flying slag from your operation.

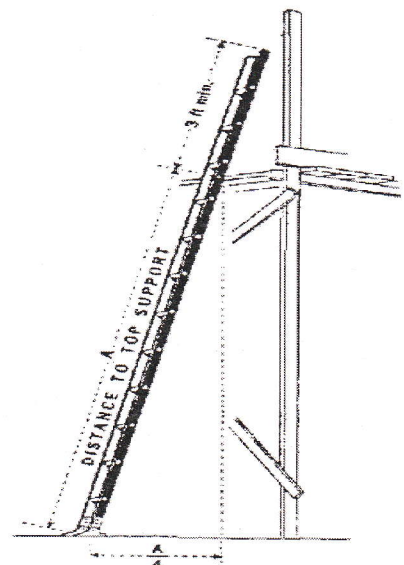
8. Ventilation is important since some plated and/or painted metals can give off harmful fumes and vapors when subjected to high temperatures from welding and burning operations. If you are indoors, make sure you have an adequate ventilation system. If you are operating outdoors, make sure you work up-wind.

Fall Protection

1. No worker or visitor shall be exposed to a fall greater than six (6) feet.
2. Employees shall be protected from falling over an unprotected edge with the use of a guardrail system, personal fall arrest system, warning line system, or other means of fall protection. (Examples of Fall Protection for Drilled Shaft Work can be found on Pages 18 & 19 in this handbook)
3. No lanyard shall be greater than (6) six feet in length and should be as short as practical. Shock absorbing lanyards are recommended.
4. Lifelines and Lanyards shall be secured to an anchorage or structural member capable of supporting a minimum dead weight of 5,000 pounds.
5. All anchorage points are to be adequate for the intended purpose.
6. No lanyard, lifeline, or safety harness shall be used for any purpose other than its original intent. These devices shall not be utilized to hoist material.
7. Personal fall arrest equipment that has sustained an impact load shall be removed from service and inspected. Lanyards subjected to an impact load shall be removed from service and destroyed.
8. Fall protection is required for open sides, open floors, or ends of floors. Open holes greater than 2 inches or more shall be covered. In no case shall a height of greater than (6) six feet from the side, end, or opening in a floor remain unprotected.
9. Ladders or stairways are required at all points of access where there is a change in elevation of 19 inches or more, and no ramp, runway, or personnel hoist is provided.
10. Protection of open holes shall be by personal fall arrest equipment, guardrails, or covers.
11. Open hole covers shall be capable of supporting twice the maximum intended load, and installed to prevent accidental uncovering. All covers shall be marked in such a manner as to allow employees clear recognition of potential fall hazard, e.g. marked "Hole".

Ladders

1. Inspect all ladders before using. Do not use the ladder if upon inspection you find broken rungs, siderails or other defects. Take it out of service.
2. Set the ladder evenly and firmly before you climb it. Manufactured straight ladders must have safety feet if used on a hard, smooth floor.
3. The bottom of a straight ladder should be set at a distance of about one-quarter of the ladder's length away from the wall it is



leaning against. In other words, for each (4) four rungs, position the bottom of the ladder (1) one foot away from the wall.

4. A straight ladder should extend at least three feet above the highest point to be reached. The ladder must then be secured to a solid structure.
5. If it is necessary to place a ladder in or over a doorway, barricade the door and post warning signs.
6. Only one person should be on a ladder at a time. Keep both hands free to climb the ladder. Do not try to carry tools and materials while climbing up or down a ladder. Use a tool pouch or rope hand line.
7. Never overextend your body on a ladder. Move the ladder when necessary.
8. When using a stepladder, make certain it is always open and level on all four feet. Lock the spreaders in place. Do not use a stepladder like a straight ladder.
9. Do not stand on the top or platform of a stepladder. If this is the only way to reach your work area, you need to use a straight ladder.
10. If extension ladders are needed, the sections must overlap a minimum of three rungs. After the top section has been raised to proper height, make sure that safety latches are engaged and extension rope is secured to a rung on the base section of the ladder.

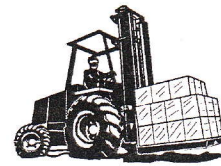
Scaffolds & Aerial Lifts

1. Before starting work on a scaffold, inspect it to determine that handrails, midrails, toeboards and decking are in place. All wheels are locked on movable scaffolds. Locking pins are in place at each joint.
2. Be sure to provide yourself with a safe means of access to the scaffold. Do not climb or work from any scaffold handrail, midrail or brace member. Use the ladder to get on the scaffold.
3. No one is allowed to ride on a rolling scaffold when it is being moved. Remove or secure all tools and material on the deck before moving.
4. Scaffold must be erected on sound footing and be secured to prevent overturn or swinging out. Metal frame scaffolds must also be tied off horizontally every 30 feet and 26 feet vertically.
5. Do not stack any material such as brick, lumber, tile, block, etc., more than 24 inches high on the scaffold deck.
6. When using a suspended scaffold, attach and secure safety belt to a lifeline before stepping onto the scaffold and do not remove it from the lifeline until you are clear of scaffold.
7. Be sure you know the safe working loads on all scaffolds.
8. Do not alter any scaffold member by welding, burning, cutting, drilling or bending.
9. Barricade areas below scaffolds to prevent persons from walking under them.
10. Secure or cleat scaffold board to prevent movement.
11. Aerial work platforms should be only operated by trained and authorized employees.

12. Inspect the unit prior to operation. Become familiar with the controls before use, each unit may be different from the one you're used too.
13. All occupants of aerial lift platforms must use personal fall safety equipment attached to an approved anchorage points located on the platform. Never attach a lanyard to an adjacent structure.
14. Never stand on rails or planks to achieve additional working heights when operating an aerial lift.
15. Observe safe load limits when operating an aerial lift.

Material Handling

1. Be aware of the material you are about to handle - is it liquid, solid, flammable, combustible, powder, heavy, light, etc.
2. Have the necessary equipment at hand before handling the material. If the material is sharp or splintered, a good pair of gloves is needed.
3. If you are moving material to storage, be aware of proper storage for that particular material. When not being utilized, oxygen and acetylene (or other fuel gas) cylinders must be stored separate from each other by 20 feet, or by a 5-foot barrier which has a ½-hour fire rating. Never let oil get on oxygen fittings.
4. If you are handling gasoline, the cans must be approved safety cans with a flash arresting screen.
5. When stacking material, be sure you stack in the proper way to insure the material won't fall or roll. Remember all material stacked will eventually have to be taken down for use. Keep this in mind when stacking material.
6. Know the weights so you don't overload a floor, platform or scaffold and collapse it.
7. When handling chemical materials, make certain you know the dangers of the material. Proper personal protective equipment will be necessary to insure your safety. (Eye protection, gloves, respirators, etc.)
8. At times you may need to carry material a great distance. Be sure your path is clear, double check to make sure the material can be transported the route intended. Example: do not carry flammable liquids through a welding operation.
9. Size up the material to be handled. If it is too large or too heavy - get help or use a forklift!
10. Do not place material in walkways, aisles, fire exits, doorways or stairwells. You may know it's there, but others won't.
11. Chain falls, hoists and come-a-longs should be of proper size for the load to be moved and should be inspected for defects prior to each use. No side loading - no cheaters. If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.



Forklifts

1. Only **trained** and **authorized** personnel shall be permitted to operate a forklift.
2. Pre-operational shift inspections shall be performed prior to operating a forklift.
3. No person shall be allowed to stand on or pass under the elevated portion of any truck, whether loaded or empty. Approved man-baskets must be utilized if the lift is to be utilized to elevate personnel.
4. Unauthorized personnel shall not be permitted to ride on powered industrial trucks. One seat - one rider allowed.
5. When a powered industrial truck is left unattended, load-engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.
6. An overhead guard shall be used as protection against falling objects.
7. Seat belts should be worn at all times when operating the lift.
8. Trucks shall not be parked so as to block emergency egress or equipment access.
9. Review the operator's manual concerning the use of outriggers, specific controls and load charts for each vehicle.

Electrical

1. All extension cords should be of the three-wire type, and construction rated. Be sure to check the cord. Never use frayed, cracked or deteriorated extension or equipment cords.
2. Do not try to repair or adjust any electrical equipment unless it is part of your regular work duties and you are fully trained.
3. If any electrical product gives the slightest sensation of shock when touched, it should be removed from service, tagged and stored where it cannot be used accidentally.
4. Electrical extension cords should not be fastened or hung from non-insulated staples, nails or suspended by wire.
5. Always handle wires as though they are hot wires.
6. Remove plugs from outlets by pulling on the plug itself, not by pulling the wire.
7. Panel boxes should be covered at all times or a warning sign posted to indicate hot wires.
8. Temporary lights should have protective cages to prevent accidental contact with the bulb.
9. Before using outlets, check for loose connections, bare wires, cracked fixtures or missing face plates.
10. All wires are considered to be "live" until inspected and locked out by qualified personnel. Safe distances are to be maintained from "live" electricity.

11. Electric equipment and tools shall not be used while standing in water. Cords shall be re-routed to prevent equipment from lying in standing water.
12. Ground-fault circuit interrupter (GFCI) device shall be used to overcome grounding and insulation deficiencies. GFCI's shall be used when plugged into permanent or temporary power sources.
13. Metal ladders shall not be allowed near high-powered electricity.
14. Fuses or circuits shall not be overridden or bridged with wire or metal.

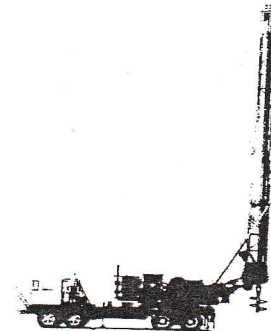
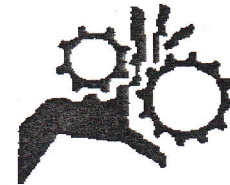
Hand and Power Tools

1. Hand tools should be kept in good condition and used only for the job intended.
2. Inspect all hand and power tools thoroughly before each use. Use provided safety guards.
3. Defective hand tools should be reported to your immediate supervisor. Common defects include: burred, battered, mushroomed, spalded, split, broken loose handle, worn teeth on wrenches, etc.
4. Be aware that hand tools with plastic handles are designed for comfort. They are not designed for electrical insulation.
5. Flying debris is a normal occurrence when using power tools. Recognize this fact and be aware: Warn people around you to utilize proper personal protective equipment.
6. Be certain that all electrical-powered tools are grounded and/or double insulated. Do not forget to inspect the cord when completing initial tool inspection.
7. Recognize the limitations of the tool. Don't force tools beyond their limitation or use "cheaters" to increase their capacity.
8. Know the tool you are using. Learning about the tool by using it is a major cause of accidents and injuries. If you don't know how a tool operates, **ASK**.
9. Be familiar with the tool you are using. If the tool has movable parts, take a second to think about that. Movable parts may jam up. Be sure you have good body position. Look at your clothing – loose clothes may get wrapped up in these movable parts as well.
10. Use proper operating procedures. If a tool is designed to have a guard – use it. If you need to change a part, drill bit, saw blade, etc. make sure you unplug the tool before adjusting the tool to your needs.
11. Use proper accessories for your tool. Do not interchange parts unless manufactured specification allows this to be done.
12. Do not alter any tool. If the tool needs to be serviced, tag the tool and take it out of service.
13. All pneumatic hose connections must be fastened securely with wire, pins or whip checks.
14. All fuel powered tools must be shut down before refueling. Smoking is prohibited during refueling.
15. Fuel powered tools will not be used inside of a building, excavation or confined space without adequate ventilation or vented exhaust.

16. Only employees who possess valid credentials are permitted to operate powdered-actuated tools.

Machine Operations

1. Never use defective equipment. It is your responsibility to inspect your machine before using it. If you find the machine to be defective in any way, tag it and notify your supervisor immediately after taking it out of service.
2. Know the limitations of the machine you use. Do not exceed those limits. Do not use the equipment for any job other than its intended purpose.
3. Certain machinery is to be run only by authorized operators. You will know if you are authorized to use that machine.
4. No modification or change shall be made to machinery that may affect the manufacturer's designed safe operation of the machine.
5. Before starting to work on any machine, disconnect the power, discharge any stored pressure/energy and then inspect it to see that all guarding is in place and properly adjusted.
6. All electrical equipment must be grounded by three-prong electrical cords. Be sure the plug is in good condition before start-up of the machine.
7. Rated load capacities, operating speed and special instructions should be posted on or near equipment. Read these before using the machine.
8. Be familiar with your surroundings. Before start-up, know where people are, what material is around you or what could interfere with your operations. If you see a potential hazard, don't start the work, clear out the hazard.
9. No machinery should be left operating while unattended. This creates blind hazards for passing personnel or other workers near the area.
10. After completing the job, make sure the machine is shut down prior to cleaning.

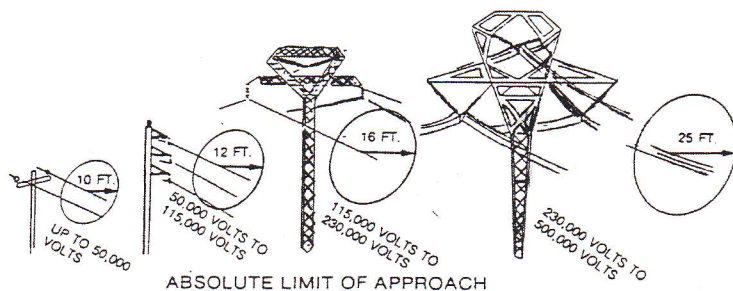


Cranes, Drill Rigs, & Heavy Mobile Equipment

1. All equipment shall be secure so that it cannot be started or moved by any unauthorized person.
2. Do not try to run in front of, behind or along side of any moving equipment as a short cut. Wait until the equipment is at a safe distance.
3. Hitchhiking a ride is strictly prohibited. Only authorized personnel may be on the equipment. Unless you are in a seat designated for people, stay off the rig.
4. No smoking while equipment is being fueled, the vapors may ignite.

5. The crane operator has a very important task to perform. Do not distract the operator. Only one person should signal the operator, using the standard hand signals. These signals must also be posted in the cab. (See diagrams on pages 20 & 21)
6. Do not let yourself get trapped in "No Man's Land," that is, within the swing radius of the cab over the tracks of the crane. This area **must** be barricaded.
7. Daily documented inspections are required for all cranes and drill rigs.
8. Cables, ropes, sheaves, shackles, booms and other lifting equipment shall be checked each day. Worn or frayed items are to be replaced or repaired at once. Safety latches shall be installed and maintained on all hooks designed for safety latches.
9. Make sure the crane capacity is correct for the job. If the rig has outriggers, use them at all times.
10. Be sure the ground can support the weight of the crane, drill rig, or any equipment placed on it. A competent person shall determine that the ground conditions will permit equipment and personnel to enter the work area.
11. Stability of ground conditions and adjacent structures shall be reviewed prior to start of operations. Periodic monitoring shall be conducted to ensure safe working conditions.
12. Many accidents involve workmen falling off equipment while climbing on and/or off. Always climb using both hands and feet with three points of contact at all times. Be aware of slick surfaces on equipment from mud, ice, oil, grease, etc.
13. Do not service any equipment unless proper shutdown procedures have been followed. Make sure all brakes and safety equipment are in place before servicing.
14. No personnel are allowed to ride in the bucket of heavy equipment or on the hook of a crane.
15. All wires are considered to be "live" until inspected and locked out by qualified personnel. Safe distances are to be maintained from "live" electricity.
16. When working near electrical lines, the following distances for the following voltages must be maintained: 10 feet for Up to 50,000 volts; 12 feet for 50,000 volts to 115,000 volts; 16 feet for 115,000 volts to 230,000 volts; 25 feet for 230,000 volts to 500,000 volts (Distances can also be seen in figure on this page)
17. When operating equipment in transit with no load and boom lowered, the equipment clearance must be a minimum of 4 ft. for voltages less than 50kV and 10 ft. for voltages over 50 kV, up to and including 345 kV and 16 ft. for voltages up to and including 750 kV.
18. When operating equipment and performing work a minimum clearance between the lines and any part of the equipment must be 10 ft.

19. When operating equipment in the vicinity of energized lines and unable to maintain free and clear visual contact with the lines, the equipment operator must designate a person whose job is to observe clearance of the equipment and give timely warning for desired clearance.



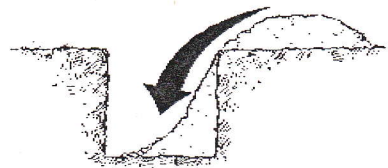
3. Danger tags and locks should be used to prevent the operation of systems which can cause injury or property damage.
4. Tags and locks should be used when testing or working on new systems or when performing maintenance.
5. Do not remove or ignore someone else's tag.
6. Do not forget to remove your tag or lock when you have finished your work and the system is safe.
7. Try to operate the system after you have locked a switch prior to working on that system to be sure it is locked out as you intended.

Motorized Vehicles

1. Only authorized and licensed drivers may operate company vehicles.
2. Seat belts must be worn in all company vehicles.
3. Do not ride in the bed of a truck containing materials which are not properly secured to prevent movement.
4. Do not back up a vehicle or equipment when the view to the rear is obstructed, unless an observer signals that it is safe to do so.
5. All personnel are prohibited from riding on loads, running boards or tailgates.
6. When transporting materials, do not overload the vehicle.

Trenching and Excavations

1. An excavation is any man-made cavity into the earth's surface. A trench is an excavation in which its depth is greater than its width. Its width is always less than 15 feet.
2. Excavations and trenches over five feet deep must be sloped, shored, sheeted or the walls braced in some manner to prevent collapse into the hole.
3. Support systems must be designed by a qualified person who considers soil structure, depth of cut, water content of soil, weather changes, superimposed loads, vibrations and other operations in the area.
4. The support system is installed from the top and worked down. It is removed from the bottom and worked up.
5. Ladders or stairs for escape must be provided in trenches 4 feet or deeper and placed so no more than 25 feet of travel is necessary. Secure the top, extend it 3 feet above grade.
6. Keep spoils back at least two feet from top edge of the excavation.
7. Keep water from accumulating in excavations.



8. Provide walkways with handrails if employees need to cross over excavations or trenches. Barricade the top edges of trenches or excavations to prevent people from falling into the hole.
9. Excavations in some locations, such as chemical plants, may allow toxic or explosive air to accumulate. The air must be tested prior to allowing anyone to enter the excavation.
10. Trench/excavation must be sloped or braced according to soil classifications.

Confined Space/Downhole (Drilled Shaft) Entry

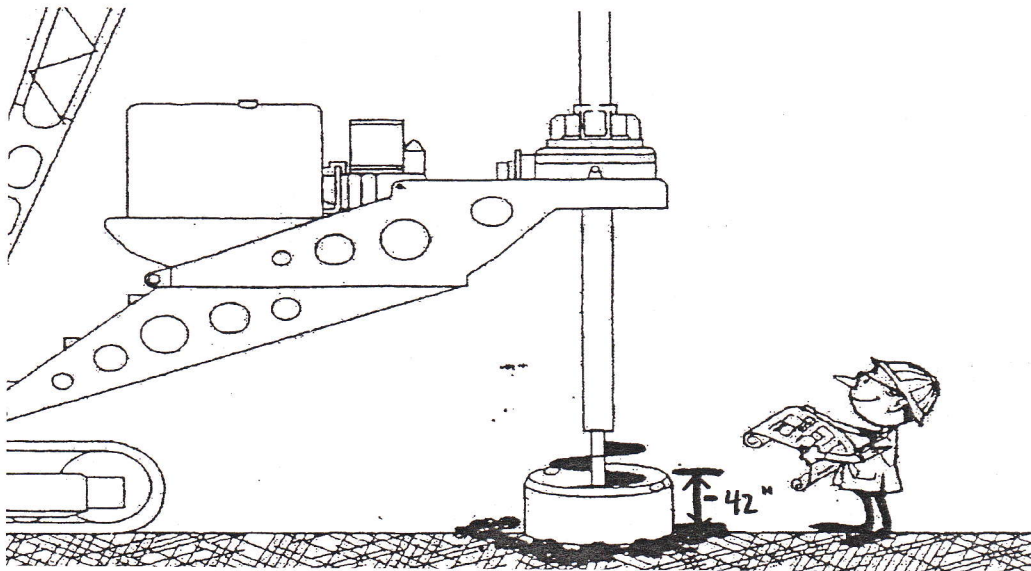
1. Never enter a confined space/drilled shaft without the approval of a supervisor and proper training.
2. Never enter a confined space/drilled shaft until the atmosphere has been tested by a designated person and determined to be safe for entry. The proper paper work should be completed when necessary before entry.
3. Adequate ventilation, mechanical or natural, must be provided whenever work is performed in a confined space.
4. Confined space/Downhole Entry work operations often require additional safety precautions. These precautions must be explained by your supervisor prior to entering the confined space/drilled shaft.
5. When Downhole Entry work is to be performed, procedures must follow those outlined in the ADSC's "**Recommended Procedures For the Entry Of Drilled Shaft Foundation Excavations**". A copy of this handbook can be obtained from the Safety Department or your District Office.

Hazard Communication

1. It is the intent of McKinney Drilling Company to recognize, communicate and protect all employees from the possibility of undesirable effects while using known hazardous substances during the course of employment.
2. The Hazard Communication Program is designed to comply with 29 CFR Part 1926.59 (OSHA Hazard Communication Standard or any State Hazard Communication Program). The program addresses comprehensively the issue of evaluating the potential hazards of chemicals and communicating this information with proper protective measures to all employees.
3. This program is on all projects and utilizes labeling, Material Safety Data Sheets (MSDS) and Tool Box Safety Meetings to train and educate employees about the hazardous substances they may encounter.
4. Tool Box Safety Meetings will cover: products classified under the law, McKinney Drilling Company labeling system (Hazard Material Identification System), possible routes of exposure, protective measures, and supply appropriate personal protective equipment and proper measures in case of product spills.
5. Chemicals may enter the body by inhalation or breathing the chemical, absorption through skin pores, ingestion through mouth and injection by direct puncture of the skin.
6. The Material Safety Data Sheet is the key to proper use and handling of chemicals. Key sections to remember are generally: Section 1 - Manufacturer Emergency Number; Section II - Product Name and Ingredients; Sections III and IV - Health Hazards and Personal Protective Measures; Section VI - Fire and Explosive Data; and Section VII - Spill Control.

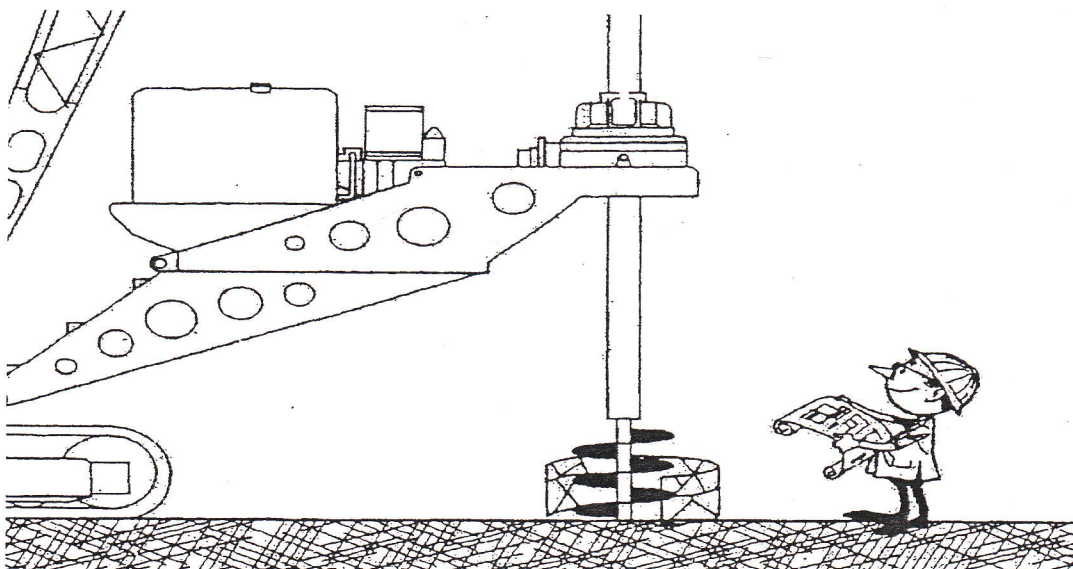
7. Once this information is communicated to you, it is up to you to observe the proper use and handling of materials.
8. It is the right of each and every employee to obtain a copy of the Hazard Communication Program. If you would like a copy, please contact the Safety Department. Most projects are not equipped to make copies. Your supervisor will have a copy of the Hazard Communication Program on the jobsite.

FALL PROTECTION METHODS FOR DRILLED SHAFT WORK-



Temporary Casing Used as a Guard Rail System

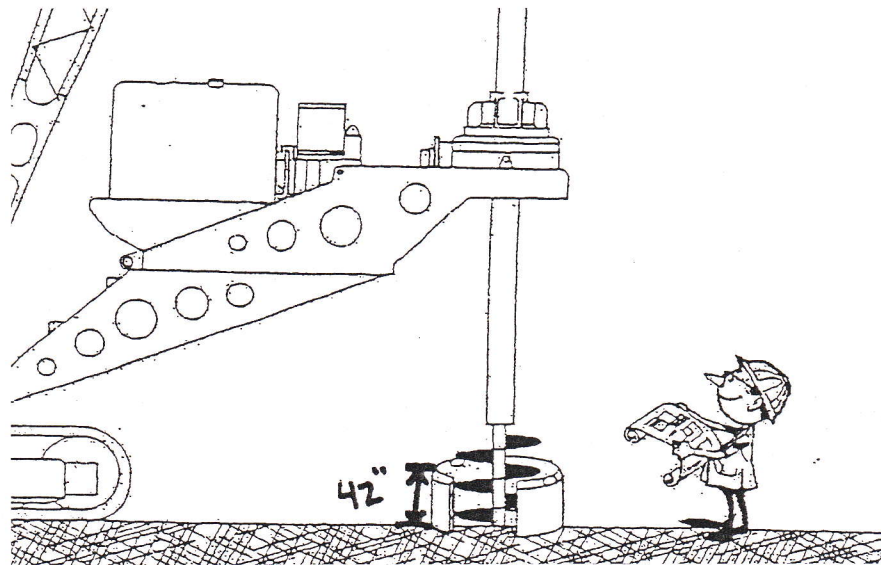
*Must be kept 42" (+/- 3") above ground level



Temporary Guard Rail System

- *Leave one side open for auger passage
- *Must be erected to resist 200lbs of force
- *Must be 42" (+/- 3") in height above ground level

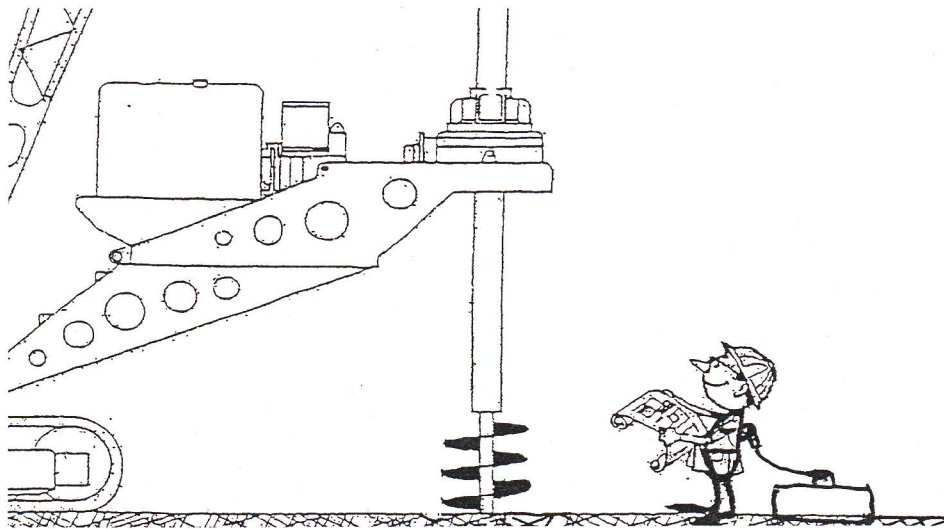
FALL PROTECTION METHODS FOR DRILLED SHAFT WORK (Continued) -



Scrap Piece of Casing

*Must be 42" (+/- 3") above ground

*Cut a passage in casing for auger to pass through



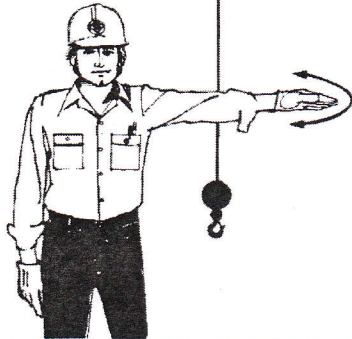
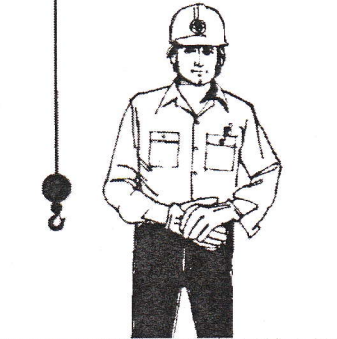
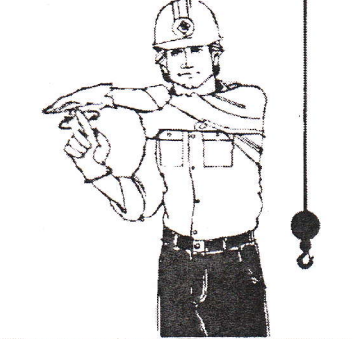

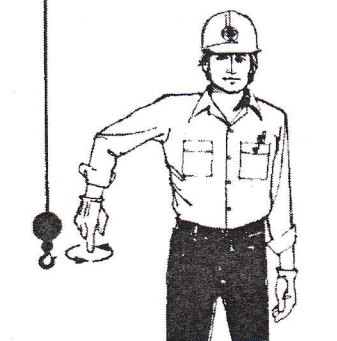
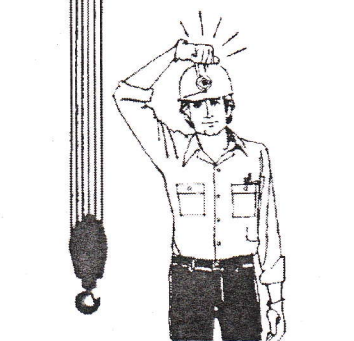

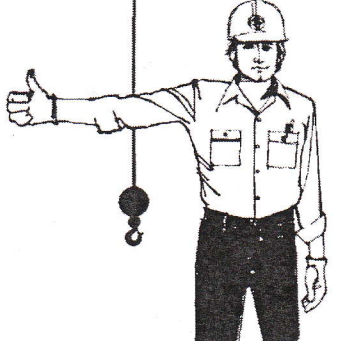
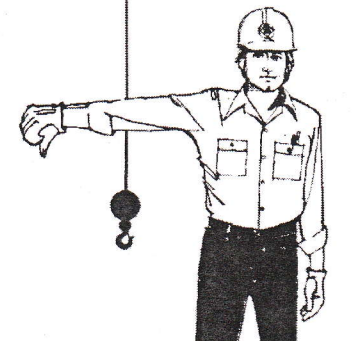
Personal Fall Arrest System

*Must not allow a fall of more than 6 feet

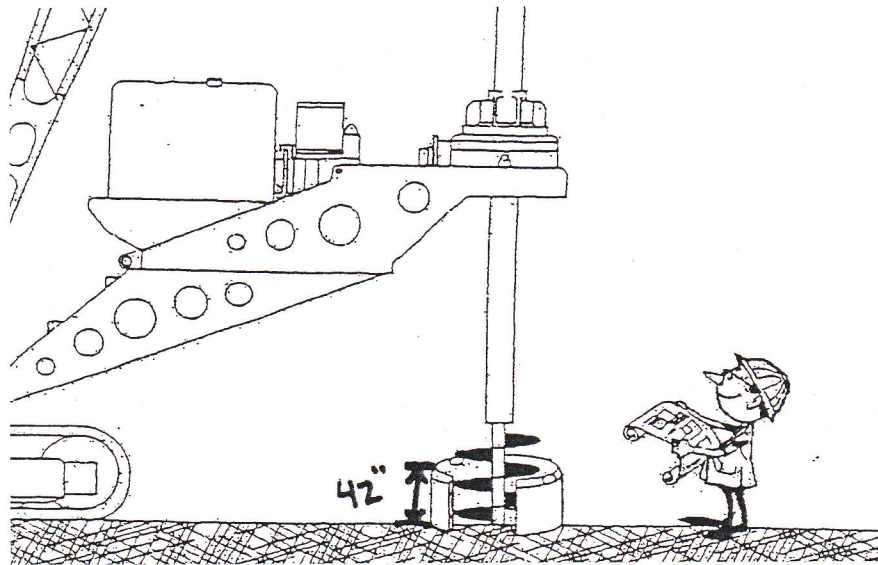
*Anchorage point must support 5000lbs per person

INSPECT YOUR FALL PROTECTION SYSTEM EVERY DAY!!!!

Crane - Hand Signals

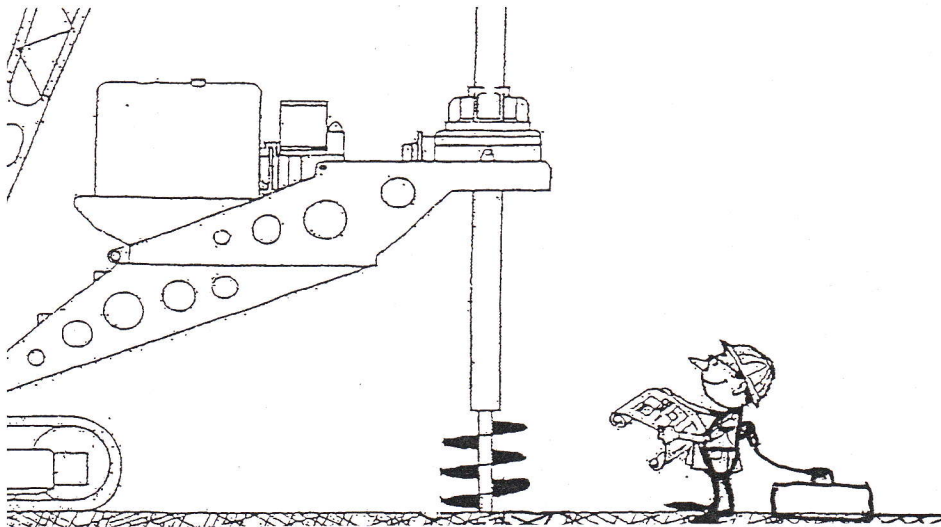
		
<p>STOP. Arm extended, palm down, move hand right and left.</p>	<p>DOG EVERYTHING. Clasp hands in front of body.</p>	<p>MOVE SLOWLY. Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal. (HOIST SLOWLY SHOWN AS EXAMPLE.)</p>
		
<p>HOIST. With forearm vertical, forefinger pointing up, move hand in small horizontal circles.</p>	<p>LOWER. With arm extended downward, forefinger pointing down, move hand in small horizontal circles.</p>	<p>USE MAIN HOIST. Tap fist on head; then use regular signals.</p>
		
<p>USE WHIPLINE. (Auxiliary hoist.) Tap elbow with one hand; then use regular signals.</p>	<p>RAISE BOOM. Arm extended, fingers closed, thumb pointing upward.</p>	<p>LOWER BOOM. Arm extended, fingers closed, thumb pointing downward.</p>

FALL PROTECTION METHODS FOR DRILLED SHAFT WORK (Continued) -



Scrap Piece of Casing

- *Must be 42" (+/- 3") above ground
- *Cut a passage in casing for auger to pass through

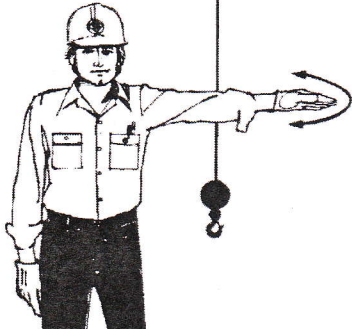
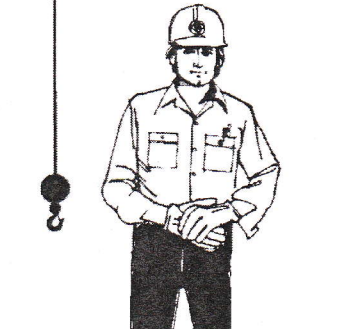
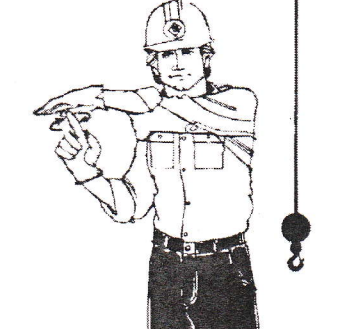

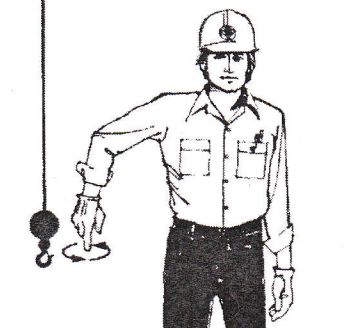
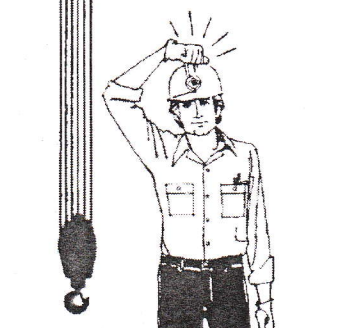

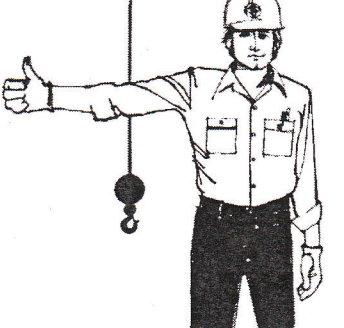
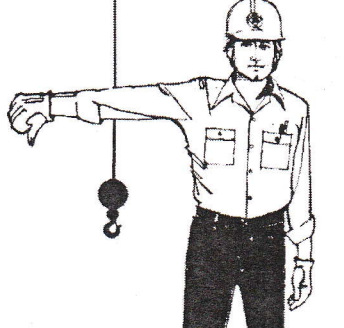


Personal Fall Arrest System

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- *Anchorage point must support 5000lbs per person

INSPECT YOUR FALL PROTECTION SYSTEM EVERY DAY!!!!

Crane - Hand Signals

		
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<p>USE WHIPLINE. (Auxiliary hoist.) Tap elbow with one hand; then use regular signals.</p>	<p>RAISE BOOM. Arm extended, fingers closed, thumb pointing upward.</p>	<p>LOWER BOOM. Arm extended, fingers closed, thumb pointing downward.</p>

Crane - Hand Signals (cont.)

<p>SWING. Arm extended, point with finger in direction of swing of boom.</p>	<p>RAISE THE BOOM AND LOWER THE LOAD. With arm extended thumb pointing up, flex fingers in and out as long as load movement is desired.</p>	<p>LOWER THE BOOM AND RAISE THE LOAD. With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired.</p>
<p>TRAVEL. (Rail Mount or trolley) Arm extended forward, hand open and slightly raised, making pushing motion in direction of travel.</p>	<p>EXTEND BOOM. (Telescoping booms.) Both fists in front of body with thumbs pointing outward.</p>	<p>RETRACT BOOM. (Telescoping booms.) Both fists in front of body with thumbs pointing toward each other.</p>
<p>TRAVEL. (Both tracks.) Use both fists in front of body, making a circular motion about each other, indicating direction of travel; forward or backward. (For crawler cranes only.)</p>	<p>TRAVEL (One track.) Lock the track on side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body. (For crawler cranes only.)</p>	

Drug and Alcohol Policy

McKinney Drilling Company Inc. (the "Company") is committed to providing a drug-free workplace and to promoting safety in the workplace, employee health and well being, customer confidence, and a work environment that is conducive to attaining high work standards. The use of illegal drugs, the improper use of prescription medications, and the abuse of alcohol by employees jeopardize those goals, since it adversely affects health and safety, security and productivity, as well as public confidence and trust. Accordingly, consistent with its commitment, the Company has developed the following policy, which applies to all employees of the Company.

Definitions

"Unauthorized drug" means any illegal drug, and specifically includes marijuana, cocaine, opiates, phencyclidine (PCP), amphetamines, barbiturates and prescription drugs which are not obtained and used under a prescription lawfully issued to the employee possessing them, and any other substances included in Schedules I through V of the Federal Controlled Substances Act when not possessed or used pursuant to, or in accordance with, a valid prescription or as otherwise authorized by law.

"Company premises" means all land, property, buildings, structures, installations, vehicles, and equipment owned by, leased to, or supplied by the Company, as well as any work site or location on which any work is performed for the Company or any of its customers, clients or contractors. For out-of-town employees, this may also include the hotel.

Prohibited Conduct

1. No employee shall ingest, use, possess, transport, sell or distribute any unauthorized drug or drug paraphernalia while on Company premises or while engaged in work for the Company.
2. No employee shall be on Company premises or report for, commence or continue work while under the influence of unauthorized drugs or alcohol. An unauthorized drug or alcohol shall be considered in the employee's system if the results of a confirmatory test of the employee's urine or other diagnostic test of the employee's breath or other bodily fluid establish the presence of an unauthorized drug, drug metabolite or alcohol at or above established cut-off levels.
3. Employees who take over-the-counter or prescribed medication are responsible for being aware of any effect the medication may have on the performance of their duties, and must promptly report to their supervisor the use of medication likely to impair their ability to do their job, or for which a warning has been issued by a pharmacy or health care professional. Any such medication also must be kept in its original container.
4. An employee must notify the Company of any legal proceeding against the employee in which the employee's use of unauthorized drugs is an issue.

Searches

The Company reserves the right to carry out searches of employees and their property including, but not limited to, lockers, desks, work areas, and vehicles, while on Company premises. An employee who refuses to submit to such a search will be subject to disciplinary action, up to and including immediate termination.

Drug and Alcohol Testing

Pre-employment Testing. The Company will require that candidates for Regular Employment or Key Field Worker status submit to an alcohol and drug test as a condition of any offer of employment.

Random Testing. The Company reserves the right to institute random drug and alcohol testing. On a regular but unannounced basis, employees may be randomly selected for drug and alcohol testing. In the event random testing is implemented, the random selection process will be such that every employee has a substantially equal chance of being selected for testing each time, regardless of whether or not he/she previously has been subject to testing.

Other Drug Testing of Employees. In addition, the Company has the right to require any employee to submit to a drug test whenever:

- The Company reasonably believes from the facts and circumstances that the employee may have violated any aspect of this Policy; or
- The employee is involved in, or has contributed to, a work-related incident which involves or could have involved injury to himself and/or any person or damage to property.
- Client Owners, contractors, or government agencies require such testing of employees to qualify for or perform work.

Drug and Alcohol Testing Procedure

1. Prior to providing a specimen for testing or submitting to drug and alcohol testing, the lab will typically require the employee (or candidate) to execute consent and release forms and authorize the release of the test results to the Company. Any person who refuses to execute the required consent and release forms or who otherwise fails to consent to, cooperate and participate in drug and alcohol testing will be subject to disciplinary action up to and including termination, or in the case of a candidate, will not be considered for employment.
2. The drug and alcohol tests will involve a urinalysis or another appropriate diagnostic test of breath, saliva, blood and/or other bodily fluid designed to detect the presence of unauthorized drugs, drug metabolites or alcohol in the system.
3. Appropriate cut-off levels will be established with the certified testing facility to set values for designating a test result as positive. Any specimen that tests positive on the initial screening test will be subject to a confirmatory test according to the laboratory's standard protocol.

Violations

Any employee whose confirmatory test is positive for the presence of unauthorized drugs or alcohol or who violates any aspect of this Policy shall be subject to discipline, up to and including termination.

Procedure for Notification of Positive Results

When an employee receives a confirmed positive drug or alcohol test result, the Company will provide to the employee:

- A copy of the laboratory record indicating the test result;
- A copy of this Policy;
- Where applicable, written notice of Company's intent to take disciplinary action or change the conditions of the employee's employment.
- Within 30 days of notice to the employee, he/she may have the same sample tested by another NIDA-certified and approved laboratory of his/her choice, at his/her own expense.

Within ten days of receiving notice of a positive drug or alcohol test result, an employee may submit to the Company, in writing, reasons to explain the positive test result other than the presence of unauthorized drugs or alcohol.

Employee Assistance and Rehabilitation

Voluntary Program: The Company encourages any employee with a drug or alcohol abuse problem to seek treatment voluntarily. In an effort to promote reform and rehabilitation, the Company will make an Employee Assistance Program (EAP) available to employees. The Company encourages any employee with a drug or alcohol problem to take advantage of the Employee Assistance Program and other avenues and support systems available to employees. Depending on your benefit status, the costs of treatment for drug and alcohol abuse may or may not be covered by health insurance.

If you think you have a problem or if you would like more information about the Employee Assistance Program, please contact the Human Resources Department at 1-410-551-8200 or 1-800-456-8835.

Your request for treatment and communications will be treated professionally and will not be disclosed to anyone except where there is a legitimate business purpose. No employee will be subject to disciplinary action solely for acknowledging a drug and/or alcohol problem and seeking treatment for the problem. However, in order to take advantage of the Employee Assistance Program, you must come forward and seek treatment before you have received a positive drug or alcohol test result or otherwise have been found to have violated any aspect of the Policy, and your participation in the Employee Assistance Program or any other treatment program will not excuse any violation of this Policy.

Rehabilitation Program: In the case of a positive test result or the violation of any other aspect of this Policy, the Company reserves the right to determine whether to allow the employee an opportunity to enter into a rehabilitation agreement as an alternative to termination or other discipline.

If it is offered, under the rehabilitation agreement:

- You must sign a release allowing your treatment counselor to contact and release to the Company's Human Resources Manager information on your attendance, level of cooperation and participation in the program, and all test results.
- You must successfully complete any alcohol/drug treatment program recommended by your counselor, including any recommended Narcotics Anonymous (NA) and/or Alcoholics Anonymous (AA) programs, and other outpatient program. A written copy of the dates and times will be provided to the Company on your treatment facility's letterhead.
- Once you have returned to work, you will be required to submit to a drug and alcohol test at the Company's discretion. Failure to comply will result in termination. A positive test result will also result in further disciplinary action up to and including termination.

Full compliance with the requirements of the individual rehabilitation agreement constitutes the conditions of continued employment. Refusal to sign an agreement or failure to comply with all of the conditions and terms will result in termination.

Job Performance

If you are taking unauthorized drugs or abusing alcohol, it impacts your health and performance, whether you use such substances on or off the job. Drug use and alcohol abuse cause and contribute to absenteeism, tardiness, illness, sloppy work, accidents, low productivity, hostility to customers and fellow employees, and adversely affects performance in other ways as well. An employee's acknowledgment of a drug or alcohol problem and/or participation in drug or alcohol rehabilitation does not relieve the employee of the responsibility of behaving properly at work and properly performing his or her job. The Company, accordingly, still may take disciplinary action, up to and including termination, whenever an employee's performance or behavior is deemed by the Company to be unacceptable.

Furthermore, this Policy is subject to change by the Company at any time without notice, and nothing contained herein shall alter or limit the Company's right to terminate an individual's employment at any time, for any reason, without prior notice.

Random Testing. The Company reserves the right to institute random drug and alcohol testing. On a regular but unannounced basis, employees may be randomly selected for drug and alcohol testing. In the event random testing is implemented, the random selection process will be such that every employee has a substantially equal chance of being selected for testing each time, regardless of whether or not he/she previously has been subject to testing.

Other Drug Testing of Employees. In addition, the Company has the right to require any employee to submit to a drug test whenever:

- The Company reasonably believes from the facts and circumstances that the employee may have violated any aspect of this Policy; or
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