

 CORPORATE SAFETY MANUAL	ENVIRONMENTAL, HEALTH AND SAFETY STANDARDS	
TITLE: DRILLING	Document Number: *	
	Issue Date: *	Revision Date:

1 Purpose

The purpose of this policy is to outline the requirements for drilling operations conducted at (Insert Company Name) jobsites. The primary types of drilling operations conducted include monitoring wells and soil vapor extraction's. The highest drilling rig is approximately 40 feet.

2 Responsibilities

It is the responsibility of the (insert title) to ensure that all employees and contractors follow this drilling policy on (Insert Company Name) Corporation jobsites.

It is the responsibility of all (Insert Company Name) employees involved in drilling operations to:

- Not use equipment until trained in its operating procedures, hazards, and safeguards and until authorized to do so.
- Report to the supervisor any equipment or safeguard that is defective.
- Use personal protective equipment according to prescribed procedures
- Replace any guard or safeguard removed for inspection, maintenance, or setup before operating the equipment.

3 Policy

3.1 GENERAL INFORMATION

Employees must be trained on the operating procedures, hazards, and safeguards of the assigned task, including the safe handling and use of hazardous substances and the personal protective equipment required.

Employees must use the personal protective equipment determined for the jobsite.

Equipment cannot be operated unless it is guarded according to applicable standards. A rotary table, cathead, kelly, and kelly bushing need not be guarded.

Vehicles not involved in the immediate rig operation must be parked a minimum distance of 100 feet from the wellbore. Equivalent safety measures must be taken where terrain, location, or other conditions do not permit this spacing.

Employees are not permitted to ride on a load being hoisted or a hoisting line. The well drilling contractor must post at all drilling sites, the telephone numbers, locations, and other relevant information pertaining to emergency personnel and facilities. This information can be recorded in the Site Specific Health and Safety Plan.

3.2 PERSONAL PROTECTIVE EQUIPMENT AND METHODS

Loose or poorly fitted clothing may not be worn during drilling operations.

If an employee's clothing becomes saturated with any flammable, hazardous, or irritating substance, the clothing must be immediately removed and replaced with suitable clothing after the affected skin area has been thoroughly washed and treated, if necessary.

While on the worksite, an employee should not wear jewelry or other adornments, which are prone to snagging or hanging and causing injury.

An employee whose length of hair poses a hazard on the worksite shall keep his or her hair contained in a suitable manner while working. Hair and beard styles shall not interfere with the wearing of respiratory protective equipment.

If chemicals harmful to the eyes are being used, appropriate personal protective equipment and eye wash stations will be provided to the employee.

If it is necessary to provide a respirator, the requirements outlined in the respiratory protection program must be followed.

3.3 FIRE PREVENTION AND PROTECTION

Smoking, open fires, or other potential sources of ignition shall be permitted only in designated areas located at a safe distance from the wellhead or flammable liquid storage areas. Operations or areas, which constitute a fire hazard, shall be conspicuously posted with a sign, "NO SMOKING OR OPEN FLAME."

Hazardous substances shall be stored in approved containers and properly labeled.

Equipment, cellars, rig floors, and ground areas adjacent to the well shall be kept free from oil or gas accumulations which might create or aggravate fire hazards.

Oxygen, natural gas, or liquefied petroleum gas shall not be used to operate spray guns or pneumatic tools.

Combustible materials, such as oily rags and waste, shall be stored in covered metal containers. The contents shall be disposed of daily.

Gasoline-fueled engines shall be shut down before refueling operations, unless the engine is needed for the control of the operation.

Fire extinguishers shall be located, tagged, inspected, and maintained. At a minimum, the following numbers of extinguishers should be provided at the locations specified:

- (a) Four 20 lb., B-C rated extinguishers at the drilling rig.
- (b) Two 20 lb., B-C rated extinguishers at the well servicing rig.
- (c) One 20 lb., B-C rated extinguisher at each welding operation.

More or larger extinguishers shall be provided where the type of operation produces more hazardous conditions. Fire fighting equipment shall not be tampered with and shall not be removed for other than fire protection and fire fighting purposes.

3.4 HOUSEKEEPING

Work areas shall be kept reasonably clean and free of debris in order to minimize slip and trip hazards. Hazardous leaks or spills shall be promptly cleaned up to minimize slipping and fire hazards.

Material used for cleaning shall have a flash point of not less than 100 degrees Fahrenheit.

Means shall be provided to convey any hazardous substances away from the rig floor while pulling wet strings of pipe.

Pipes, drill rods, casings, augers and other drilling tools must be properly placed in racks or sills to prevent rolling and/or sliding.

Penetration or other driving hammers must be placed at a safe location on the ground and secure from moving.

Gasoline must be stored in non-sparking red containers with a flame arrester in the fill spout and the word gasoline visible.

3.5 WELLS CONTAINING HYDROGEN SULFIDE

Drilling and servicing of wells shall be as prescribed in the American petroleum institute document, RP49, reissued 1975, recommended practices for safe drilling of wells containing hydrogen sulfide. This document is incorporated herein by reference.

Where hydrogen sulfide or any other unusually hazardous gas is known or suspected to exist, the employer must advise the employees of the possible exposure involved and shall provide training and personal protective equipment

Where it is not necessary to maintain a cellar on wells producing hydrogen sulfide, the cellar shall be filled to eliminate the hazard of accumulation of hydrogen sulfide gas.

3.6 SAFETY BELT, LIFELINE, AND LANYARD USE

An employee, when engaged in work 10 feet or more above the rig floor or other working surfaces must follow the requirements of the Fall Protection Program.

Employees should wear a safety belt or harness with an attached lanyard, except during rig up and rig down.

A safety belt, safety harness and any lifeline and lanyard must be used only for safeguarding the employee.

A safety belt, safety harness, lifeline, or lanyard subjected to in-service shock loading, rather than static loading, shall be removed from service and shall not be used again for employee protection.

The safety belt, safety harness, lifeline, and lanyard must be provided, constructed, inspected, and maintained.

When working in the mast or derrick, an employee must be provided with a safety belt or safety harness and a lanyard or lifeline which is adjusted to allow the minimum of drop in case of a fall.

3.7 DRILLING OPERATIONS

Contact DIGSAFE before beginning any drilling operations.

The drill rig is not to be driven from hole to hole with the derrick in the raised position.

Employees must check for overhead obstruction before raising the derrick. The drill rig must be leveled and stabilized with leveling jacks and/or solid cribbing before raising the derrick. The derrick must be locked before initiating operations.

The drill rig can only be operated from the control positions.

Exhaust fumes that accumulate in a confined or enclosed space must be exhausted.

The operator and the tool handler must work together when connecting and disconnecting the auger sections. The handler stands away from the rotating auger when connecting and disconnecting auger sections.

A pin is inserted and tapped in place, using a hammer or similar device, when securing the auger to a power coupling. A tool hoist is used when lowering the second section of auger into place. Both operations must stand clear of the auger as it is being lifted into place. Long handled shovels should be used to move dirt away from the auger.

No attempt can be made to exceed manufacturers ratings of speed, force, torque, pressure, flow, etc. The drill rig and tools are to be used only for the purpose for which it is intended.

Employees must clean mud and grease from their boots before stepping onto the drill rig platform. Employees should use railings to prevent slipping off of the platform.

All tools must be attached to the derrick with safety lines. When finished with the tools, they must be removed from the platform.

Employees should not touch metal parts with exposed flesh during freezing weather.

All unattended boreholes must be adequately covered.

While working on a derrick platform, never guide the drill rods or pipe into racks or other supports by taking hold of a moving hoist line or traveling block.

All drilling operations must be terminated during electrical storms.

3.8 OVERHEAD AND BURIED UTILITIES

All overhead and buried utilities must be identified and located and noted on the boring location plans and boring assignment sheets.

3.9 SUPPLYING POWER TO JOB SITE

All wiring and fixtures used to provide electricity for drilling operations must be installed by a qualified person in accordance with the National Electric Code (NFPA 70-1984) with consideration of the American Petroleum Institutes recommended practices for electrical installation for production facilities (API-RP-500B).

3.10 **EMERGENCY PROCEDURES**

Contact with power lines

If a drilling rig or a drill rig carrier makes contact with overhead or underground electrical wiring, the operation and the person in the seat of the vehicle should remain seated and not leave the vehicle. **DO NOT TOUCH ANY PART OF THE VEHICLE OR RIG.**

If personnel must evacuate the drill rig, they should jump clear, as far as possible and land with both feet together and then hop from the scene.

4 References

National Electric Code (NFPA 70-1984)

American Petroleum Institutes recommended practices for electrical installation for production facilities (API-RP-500B).