EMPLOYEE SAFETY AND HEALTH HANDBOOK
Toledo Mudlogging Services, Inc.
P.O. Box 1209
Many, LA 71449

Employee Stop Work Authority Policy Statement
President: Michael Danos
Ph: 318-590-9755
Fax: 318-590-9754

Toledo Mudlogging Services, Inc.
Stop Work Policy Statement

I, Michael Danos, President, Toledo Mudlogging Services, Inc. fully support the “Stop Work Authority” policy that all Toledo Mudlogging Services, Inc. employees have the authority to “Stop Work” at any job site or location where the employee deems it necessary to any persons safety to do so.

Sincerely

Michael Danos, President
Toledo Mudlogging Services, Inc.
Toledo Mudlogging Services, Inc.
P.O. Box 1209
Many, LA 71449
Ph: 318-590-9755
Fax: 318-590-9754

Re: Random Drug Testing 20% of Employees

Drug and Alcohol Abuse Random Drug Testing Policy

Michael Danos,

Toledo Mudlogging Inc., prohibits the use, transportation promotion or sale of alcohol, illicit drugs, and the misuse of prescription drugs and the possession of firearms or explosives during working hours. You must not report for work under the influence of any drug, alcohol beverage, intoxicant or other substance including legally prescribed drugs which will in any way affect work ability, alertness, coordination, response, or risk the safety of yourself or others.

Toledo Mudlogging is committed to random drug testing 20% of all field employees each calendar year. These random tests will be performed quarterly by use of random number generating software. Numbers generated will be based on the current number of employees at the time the numbers are being generated.

Sincerely

Michael Danos, President
Toledo Mudlogging Services, Inc.
Drug and Alcohol Abuse Policy

Toledo Mudlogging Inc., prohibits the use, transportation promotion or sale of alcohol, illicit drugs, and the misuse of prescription drugs and the possession of firearms or explosives during working hours. You must not report for work under the influence of any drug, alcohol beverage, intoxicant or other substance including legally prescribed drugs which will in any way affect work ability, alertness, coordination, response, or risk the safety of yourself or others.

“Safe” levels of illicit drugs cannot be determined; therefore, being on the job with any amount of illicit drug constitutes grounds for dismissal.

During the course of your employment, you may be subject to testing and/or searches for possession or use unauthorized materials such as alcohol, drugs, or firearms as required by our policies or those of the companies with which we do business. Your entry into or presence on Toledo Mudlogging Inc. controlled or provided work sites is conditioned on the right of Toledo Mudlogging Inc. or its representatives, to search any employee's property, including lockers, lunch boxes, baggage, quarters and private vehicles, (including trunks and glove compartments, etc.) By entering into or being present on Toledo Mudlogging controlled or provided work sites, vehicles or owned property, which may include periodic and unannounced searches of anyone while on, entering or leaving such facilities. This is a condition of employment.

If the employee or subcontractor chooses not to consent to the searches or medical testing, the employee may be subject to termination. All searches will be conducted in the presence of a Toledo Mudlogging, Inc. representative. These searches may include the use of electric or electronic detection devices, scent trained animals, or the taking of blood or urine samples for testing to determine the presence of substances prohibited by this policy. Toledo Mudlogging, Inc. will pay for the full cost of such tests and transportation to and from such tests. This does not limit the rights of companies for whom we work to conduct their own searches and requesting testing as a result of those searches.

Sincerely,

Michael Danos, President
Toledo Mudlogging Services, Inc.
1. If an employee or sub-contractor chooses not to consent to searches or medical testing for drugs the employee may be subject to termination?
   True or False

2. Toledo Mudlogging employees are required to also follow the safety plans of oil companies we work for?
   True or False

3. Toledo Mudlogging employees are expected to inspect and report any unsafe conditions observed at a work site?
   True or False

4. Toledo Mudlogging employees are not required to fill out Near Miss or Incident Reports?
   True or False

5. Toledo Mudlogging's safety investigation report contains 9 key questions it should answer?
   True or False

6. It is the individuals responsibility as an employee to perform your work in a safe manner?
   True or False

7. Toledo Mudlogging employees are only required to wear a hardhat on a drilling rig if the toolpusher tells them to?
   True or False

8. Toledo Mudlogging employees are required to wear steel toed boots when outside on any drilling locations?
   True or False

9. Toledo Mudlogging employees are only required to wear safety glasses if the sun is shining?
   True or False

10. Toledo Mudlogging Health & Safety Manual states OSHA's acceptable short-term H2S exposure limit is 15 PPM?
    True or False
Forward

At Toledo Mudlogging, Inc., our employees are our most valued assets. Accordingly, the establishment and enforcement of policies and procedures which ensure your safety and health are protected are one of our highest priorities.

Every employee is responsible for their part to help us provide a safe work environment, minimize employee on the job illnesses and injuries and achieve and maintain a safe and healthy work place. This responsibility means you conduct yourself in such a way that you will not endanger yourself or your fellow employees. In addition to exercising care and good judgment, it is also your responsibility to report unsafe conditions, unsafe acts and unsafe equipment to your supervisor when you observe them.

As a part of Toledo Mudlogging, Inc., you are expected conduct your work relationships in a professional manner with both internal and external contacts. Toledo Mudlogging Inc., is committed to compliance with laws and regulations designed to prohibit discrimination against people based on race, religion, ethnicity, sexual orientation, creed, or age. This includes maintaining an environment in which all members of our society are comfortable. To attain this environment, Toledo Mudlogging employees will conduct themselves so that no employee is offended by comments, action, or other incidents. This includes the right to be free from sexual harassment and to report such incidents without fear or reprisal.
The information contained in this handbook is not all inclusive. Specific information such as the Hazard Communication is available on the mud-logging unit and in the company office. This handbook does, however, contain lessons learned through experience. You must become familiar with the rules and guidelines contained in this book. Following them is a condition of employment and **YOUR JOB MAY DEPEND ON IT**.

Every employee is expected to exercise good judgment and common sense while performing his/her duties. Policies, procedures and safety practices cannot be written for every conceivable work condition. Should any doubt arise as to proper procedures or interpretation, contact your immediate supervisor.

Welcome to Toldeo Mudlogging, Inc. We are glad you decided to join our organization. It is our desire to establish a sound, mutually beneficial working relationship based on trust and cooperation. To accomplish this,. It is important that you know, understand and follow the rules, policies and directions that affect you and help us continue in business. Accident prevention and safety are high priorities for Toldeo Mudlogging, Inc. You are expected to read, know and follow the guidelines in this handbook.
If you are required to drive a company vehicle, you will be required to be on the approved Driver’s list. To be placed on this list your driving record will be examined and reviewed at least annually. A record showing serious violations, such as driving under the influence of alcohol or drugs, or repeated violations will preclude you from being placed or remaining on the list. Your are expected to follow all traffic rules, use your seat belt and not drive a company vehicle when you are in a physical or mental condition that impairs your judgment or ability to drive.

It is your responsibility to be present for work when specified by your supervisor. If you require time off, please notify your supervisor four days in advance. Exceptions will be made for emergencies. However, notify your supervisor of any emergency as soon as possible so a substitute can be assigned to work your place.

Drug and Alcohol Abuse Policy

Toledo Mudlogging Inc., prohibits the use, transportation promotion or sale of alcohol, illicit drugs, and the misuse of prescription drugs and the possession of firearms or explosives during working hours. You must not report for work under the influence of any drug, alcohol beverage, intoxicant or other substance including legally prescribed drugs which will in any way affect work ability, alertness, coordination, response, or risk the safety of yourself or others.
“Safe” levels of illicit drugs cannot be determined: therefore, being on the hobs with any amount of illicit drug constitutes grounds for dismissal.

During the course of your employment, you may be subject to testing and/or searches for possession or use of unauthorized materials such as alcohol, drugs, or firearms as required by our policies or those of the companies with which we do business.

Your entry into or presence on Toledo Mudlogging Inc. controlled or provided work sites is conditioned on the right of Toledo Mudlogging Inc. or its representatives, to search any employee's property, including lockers, lunch boxes, baggage, quarters and private vehicles, (including trunks and glove compartments, etc.) By entering into or being present on Toledo Mudlogging controlled or provided work sites, vehicles or owned property, which may include periodic and unannounced searches of anyone while on, entering or leaving such facilities. This is a condition of employment.

If the employee or subcontractor chooses not to consent to the searches or medical testing, the employee may be subject to termination. All searches will be conducted in the presence of a Toledo Mudlogging, Inc. representative. These searches may include the use of electric or electronic detection devices, scent trained animals, or the taking of blood or urine samples for testing to determine the presence of substances prohibited by this policy. Toledo Mudlogging, Inc. will pay for the full cost of such tests and transportation to and from such tests. This does not limit the rights of companies for whom we work to conduct their own searches and requesting testing as a result of those searches.
October 1, 2002

Signed: Original signed
Jackie Small
President

Original signed
Mike Danos
Vice-President
The Owners and Management of Toledo Mudlogging, Inc. have established this policy to provide a safe and healthy work environment for everyone and for the protection of our shared environment. A healthy, safe, environmentally friendly workplace does not occur by chance. It requires each of us to pay close attention, to care for ourselves and others working near us. Open communication between each of us and especially between management and employees will help everyone.

We must all know the hazards of our jobs along with the safety requirements and standards that must be followed. Managers and supervisors must, through their own “pro-safety” attitudes and practices, instill a positive attitude in workers. In return, employees must give training, exercises and safety meetings the utmost attention and must follow all safety, health, and environmental regulations and guidelines. Compliance with safety policies is a condition of employment and must be taken very seriously. Failure to comply will result in disciplinary action, including termination of employment for serious and repeated violations.

Workers who notice hazards or other safety problems, or who believe that they need additional training, must notify their supervisors immediately. Supervisors and management must respond to the concerns of workers and make sure that any problems are fixed quickly to improve the work area.
Nothing is more important to this company than your safety and that of you co-workers. Do not think that safety is to be discarded because work is more important. Safety and quality work go hand in hand. Studies have shown that the safer a workplace, the more productive its workers and the better its products. Conscientiously follow safety rules at all times. Do not take shortcuts. Do not endanger your own life and health or that of your co-workers. Be safe so that you can stay healthy and enjoy life to its fullest.

While we often work with customers who safety requirements may not match ours, Toledo Mudlogging employee's must follow the policies and requirements set for them in the company ESH manual.

Signed:  
Original signed by Jackie Small  
Original signed by Mike Danos  
President Vice-President
Table of contents

Forward 1
Drug and Alcohol Abuse Policy 3
Toledo Mudlogging Environmental, Safety and Health Policy Statement 6
General Safety and Health Plan 10
Shop Foreman 15
Office Manager/Clerk: 16
Mudlogging Unit Supervisors 16
All Employees (including contractors) 16

Key Areas of Responsibility 17
Hazard Identification, Assessment and Control: 20
Reporting Accidents, Job–related Injuries and Illnesses 23
Employee Safety and Health 24
General Safety and Housekeeping 29
Personal Protective Equipment 30
Lock-out/Tag-out 37
Chemical Hazards–Your right to know 41
Yard, Shop and Field Operations 44
Lifting 44
Hand Tools 46

Electrical safety 47
Jacks 50
Ropes, chains and slings 51
LP Gas 52
Forklifts 53
General Safety and Health Plans

Toledo Mudlogging is totally committed to employee safety, health and loss control. It is our intention that:

All employees work under the safest conditions possible.
All employees prevent hazards from occurring in their work area.
We provided the information, tools, training, and supervision to permit our employees to work safely in a non-hazardous environment.

In voluntary compliance with the occupational Safety and Health Act, Toledo Mudlogging management must furnish employees with a place of employment that is free from recognized hazards that are likely to cause death or serious injury. In addition, Toledo Mudlogging, management wishes to, and must, have all employees comply with specific standards and rules that apply to their workplace and work they perform. To accomplish this, Toledo Mudlogging must educate and train employees in the rules and regulations that apply to them. The information contained in this general Safety and Health plan states basic safety rules and procedures that are to be followed by all company employees. While this plan will help you recognize and avoid obvious hazards, it is merely intended to highlight some of the fundamentals of safety. It cannot, nor is it intended to, cover all possible situations. Each employee is required to apply common sense, an understanding of the work area, the use of Job Safety Analysis, and hazard identification processes to minimize the potential for exposure to hazardous situations.
In addition to this general safety plan, Toledo Mudlogging employees will also follow the safety plan of the Oil Company who hired us. When the two plans appear to conflict, notify your supervisor. Do not rely on guidance from an external company for your or others safety.

This plan is designed to generally reflect Toledo Mudlogging's policy. It is not intended to be a binding legal contract. Therefore, it does not alter any employee's at will status not grant any other legal rights to any employee.

**Safety and Health Responsibilities**

Our goal is to make the safety of our employees and contractors the highest priority and to avoid any workplace accidents, injuries or exposures to hazardous substances. We can only accomplish these goals if everyone takes full responsibility for their actions. We are assigning specific safety and health related duties to our management personnel. However, the assignment of these duties does not lessen the individual duty and responsibility each of us has to identify, correct, and report and known or suspected hazard in the workplace.

Management personnel (Primarily the Operation Manager) are responsible for:
Administration: Administer all aspects of this plan.

Hazard Control: Develop programs and guidelines to identify and minimize hazards to employees and contractors in the workplace.

Safety Training: Assigning training topics, verifying that training is complete, and assists employees with schedules and topics.

Inspections and visits: Conducts inspections of units, shop and office for cleanliness and hazards. Insures any identified hazards are corrected.

Safety Motivation: Develops programs to improve safety performance.

Poster and notices: Properly maintains the required Federal and state health and Safety posters and notices, emergency phone numbers and other required notices.

Accident and “Near Miss” recording: Develops and maintains accident and near miss investigation and reporting procedures and systems to:
- record reportable incidents consisting of fatalities, lost workday cases, and cases without lost workdays requiring medical treatment.

- determine accident causes.

- keep management informed of findings.

Accident Reporting: Reports accidents involving an occupational fatality or three or more hospitalized workers to OSHA within eight hours of occurrence.

**Operations Manager:**

Familiarity with Regulations: The operations manager will be familiar with environmental, safety and health regulations related to his area of responsibility.

Safety Oversight: Oversees the health and safety activities within the operations of the company.

Environmental Oversight: Oversees the environmental protection activities of the company. Oversees the disposal of hazardous wastes and the proper disposal of hazardous material generated from work materials.

First Aid/Medical Attention: Insures that proper arrangements have been made for first aid prompt medical attention in case of serious injury.
Personal Protective Equipment: Ensures that needed PPE is available and properly used and maintained by employees.

Safety Training: instructs or arranges for instruction in job health and safety for all employees.

Regular Inspections: Conducts or arranges for instruction in and regular health and safety inspections of the work place.

Problem correction: Directs corrections of any unsafe condition that are discovered or brought to his attention.

Safety Meetings: Conducts regular safety meeting with employees. Monitors (attends when practical) remote location meeting attendance and reports.

Mud Logger Compliance: Ensures that all employees and contractors understand and comply with safety requirements.

Accident and “Near Miss” Investigations: Reviews all accidents and unsafe practices with workers and foremen involved and insures that corrective action is taken.

On-Site Records: Maintains copies of applicable programs.
Shop Foreman

Familiarity with Regulations: familiarizes himself or herself with safety regulations that pertain to the shop, unit construction, and unit transportation.

Personal Protective Equipment: Ensures that persons working or visiting the shop area use proper PPE while in the shop area.

Housekeeping: Ensure shop area is cleaned daily with equipment, tools, and machines returned to their proper storage condition and area.

Safety Training: Ensures shop personnel know, understand, and comply with safety rules and this plan.

Safety Meetings: Conducts periodic safety meetings with Shop personnel, to include daily tailgate meetings to discuss work scheduled for each day. Records the specific information and actions taken to eliminate hazards identified in the shop and unit storage areas.

Treatment of Injuries: Ensures all injuries, no matter how small, are reported, treated and follow up discussions are conducted to eliminate recurrence.

Reports: Reports and needed corrective actions beyond his or her control to upper management.
Office Manager/Clerk:

Accident and Inspection records: Maintains permanent records associated with accidents, on-site inspections and in-house audits. Including those required for workers compensation.

Medical Records: Maintains all medical records, evaluations, and exposure monitoring records for 30 years.

Safety Training Records: Maintains all training records for at least three years.

Mudlogging Unit Supervisors

Conduct unit inspection upon receipt of unit (See Attachment C for Form)
Fax completed form to Toledo Mudlogging (Fax 318–590–9754).
Conduct unit inventory upon release from work and forward listing of replacement items and repairs needed.

All Employees (including contractors)

Follow Safety Rules: Follow the applicable safety rules and regulations at all times. Be prudent and cautious, not a risk seeker or taker. Refuse to take short cuts. Think about the task your about to do, go over the steps, perform the task properly, don't rush or hurry, do each step with safety as the priority.
Avoid Unsafe Acts: Never perform any task that appears to be risky or unsafe; report any such conditions or practices immediately.

Use PPE and Safety Devices: Always wear PPE on location and use safety devices when needed.

Safety Meetings: Toledo Mudlogging field personnel will attend daily tailgate meetings held by the oil company managing the remote location. Whenever possible, officers of the company will attend the tailgate meetings. When it is not possible for company officials to attend, the mud-logging unit manager will forward a copy of the topics discussed to the main office for review and inclusion in the company safety meetings.

Listen and follow foreman or supervisor's directions. Listen to the supervisor in charge of the work or location. They are charged with your safety, however, do not accept risks or unsafe conditions. Report them to your supervisor.

Avoiding Discipline or Discharge: Each employee is responsible for his or her actions. They alone are charged with following the safety rules and for their job performance. Failure to follow safety rules will lead to disciplinary actions, to include discharge.
Key Areas of Responsibility

Each member of Toledo Mudlogging is responsible for identifying, reporting, and correcting hazards in their workplace. The very nature of our work at remote sites makes it impossible for the management to inspect and correct every hazard. Without the help of each worker, Toledo Mudlogging management will not be able to provide a safe workplace. It is incumbent on each individual to identify hazards, report and if possible, correct them.

The reporting of injuries of occupational illnesses is also an individual responsibility. While the companies we work for normally report major incidents, it is incumbent on the individual to report all incidents when they occur. If they are not promptly reported, individual treatment may not be permitted because proof of occupational injury is lacking. When our employees report incidents promptly, it permits us to insure others do not unknowingly experience similar hazards.

Toledo Mudlogging STRICKLY forbids the following! Violation of one of these policies may result in termination or other disciplinary actions. This is a list for guideline purposes and is not intended to be a complete and exhaustive list.

Alcoholic Beverages: Possession of or consumption of alcoholic beverages while on duty or reporting to work under the influence of alcohol.

Narcotics or Drugs: Possession or use of narcotics or other illegal drugs, possession of drug related paraphernalia, reporting to work with detectable levels of illegal drugs of any type or refusal to comply with a search or testing procedure.
Leaving work: Leaving the work site without proper permission and/or relief while on duty.

Theft: Unauthorized removal, use or destruction of company property or supplies or property owed by others.

Abuse: Abuse or destruction of company property through misuse of, or failure to properly maintain equipment.

Firearms: Possession of firearms or unauthorized explosive material at a work location or in company equipment.

Smoking: Smoking in designated “No Smoking” area.

Horseplay: Horseplay and practical jokes.

Unsafe acts: Continued or repeated violation or disregard of company policies, recommended safe practices, or work procedures.

Absenteism: Excessive absenteeism or patterned absence and tardiness. You must call your supervisor if you must be absent from work.
Job duties: unsatisfactory performance or failure to comply with work rules.

Insubordination: Refusal to follow a supervisor's direction or other disrespectful conduct towards a supervisor.

Fighting: Actual or threatened physical violence towards a supervisor or any employee or contractor.

Hazard identification, Assessment and Control:

1. Shared responsibility: It is the responsibility of everyone at the workplace to identify hazards before an incident (Accident or Occupational Illness) occurs.

2. Conducting regular inspections: To insure hazards and unsafe practices are identified before they cause an injury, formal safety and health inspections will be conducted on a regular schedule. (forms for the inspections can be found in appendix A: Forms)
Operations Manager
Monthly inspection of one remote unit
Monthly inspection of shop
Monthly inspection of office

Shop Manager
Daily inspection of shop
Daily inspection of ready unit
Monthly fire extinguisher inspection in shop
Monthly fire extinguisher inspection of fire extinguishers in units

Office Manager
Daily inspection of offices
Monthly inspection of fire extinguishers in office
Quarterly Water analysis

Mud Logging Unit Managers
Inspection of unit at start and end of work at a single location

Report all shortages to Operations Manager

Inspection of fire extinguishers at the start and end of the work at each well location.
Report submitted to Operations Manager
Mud Loggers
Pre-job planning and preparation of Safe Job Analysis form

Submission of Safe Job Analysis to Operations Manager.

Driver
Pre and post trip vehicle inspections
Vehicle fire extinguisher monthly inspections

Fixing the problems: After completing an inspection or safe job analysis, the person completing it will:

Discuss findings with other employees in the same work area and determine responsibility for unsafe conditions or hazards revealed.

Solicit recommendations and comments on the findings for those who work in the area.

Discuss the situation with the location foreman or the operations manager, as appropriate.

Insure that the hazard and the action taken to eliminate it are reported to the Operations Manager to insure all employees are told about it to prevent similar hazards in their work area.

Provide a copy of the inspection or Job Safety Analysis to the location foreman and to the Operations Manager.
Reporting Accidents, Job–Related Injuries and Illnesses

All on the job accidents, job related injuries and illnesses must be reported in accordance with the following rules:

Following Orientation Rules: Information on reporting job-related accidents must be covered in full during discussions with the Operations Manager during hiring, when done telephonically, or during an orientation, when hiring is conducted in person. This book contains copies of inspection and reporting forms.

Reporting Immediately: All accidents, on-the-job injuries and illnesses must be reported to the Operations Manager or, in his/her absence, to the office manager, immediately—No Matter How Minor They May Appear.

Cooperating in the investigation: Employees who are involved in, or witness accidents are required to give full details concerning the accident and, when possible, to secure the accident scene for further investigation, the nature and extent of their injuries, the cause, the time, and date of occurrence, and all other relevant information. This information is required to preclude similar incidents from occurring at other work locations.

Securing Medical Treatment: Employee shall immediately secure any necessary medical treatment needed. Where authorization for medical treatment is required, treatment for major injuries or illnesses shall no be delayed while authorization is sought. Authorization shall not be unduly withheld.
Recording Information: All accident reporting forms must be filled out. If first aid is applied on-site, the nature of the first aid, condition of the individual, and recommendation for further treatment must be recorded.

Securing the accident site: The site of the accident shall be secured, if safe to do so, and shall no be disturbed until released by the location foreman or upon completion of the investigation.

Detecting Symptoms: All employees should learn to detect early signs and symptoms of illnesses or ailments to get prompt and proper treatment.

Avoiding Discharge or Discipline: An employee who does not promptly or properly report illnesses in accordance with this policy may be disciplined or discharged.
Employee Safety and Health

General Policies

Accident Prevention Orientation: Each a new employee, regardless of job classification or experience, will be given an accident prevention orientation. It will be conducted by the direct supervisor and will cover general safety topics. This orientation will be presented as soon as possible after the employee has been accepted and prior to the time scheduled for work.

Work Safety: It is your responsibility as an employee to perform your work in a safe manner at all times. When you are not working safely, you are not doing your job. Never take short cuts or chances.

Remain Alert at Work: Stay alert at all times. Know what is happening around you and with the drilling rig. Know the safe operating procedures, evacuation routes, signals and warning signs of problems. If in doubt, ask your supervisor or the oil company foreman on site.

Accident Prevention: Know the hazards of the well site the work you are doing, and plan your tasks using the Job Safety Analysis forms located in the rear of this book.

Personal Protective Equipment: Personal protective Equipment, such as eye protection, noise protection, fall protection, hard hats and foot apparel must be worn when working on location and when needed by the specific job on hand. Safety glasses shall be worn when outside on well sites and shall be augmented with face shields when handling hazardous chemicals.
Safety Meetings: Safety meetings are designed to provide you with information to help keep you safe. Attendance at on-site safety meetings is mandatory. Scheduled company safety meetings will be attended when directed by company officers.

Tools, Equipment, and Machinery: Employees shall not attempt to operate any tool, piece of equipment or machinery unless properly trained and authorized by the immediate supervisor. Defective tools, equipment, machinery or unsafe work practices or conditions shall be reported immediately to your supervisor. Keep tools and equipment clean, in good condition, and stored properly when not in use.

Cleaning of Machinery: The cleaning of equipment shall only be done when the machinery is stopped and secured as specified in the lockout/tagout policy.

Vehicle Drivers: Only drivers on the approved drivers list shall be authorized to drive company equipment.

Housekeeping: Good housekeeping is a must. Poor housekeeping is an accident waiting for a person to happen by. It is everyone's responsibility to clean up the work area after they finish their work. Use it, clean it, maintain it, and put it up. Pick up tools and equipment to prevent tripping hazards, clean up spills to prevent slips.
Guards: All moving equipment shall be guarded. If the guard is not properly attached, the machine shall be disabled.

Storms: Employees shall not go on derricks, tanks, or tank-walks during electrical storms. Employees should unplug all electrical equipment, such as, but not limited to: computer, gas panels, WITS box, etc, if rig is not drilling or if battery backup is present, when rig is drilling, to run the devices temporarily until the lighting subsides.

Stairways and handrails: Handrails shall be used when ascending or descending stairways. All stairways and handrails shall be maintained in good order and meet the spacing specifications.

Pinch Points: Keep hands, feet, and other body parts clear of “crushing” or “pinching” points.

Lifting: Always get help or mechanical assistance to lift heavy loads. Use proper lifting techniques at all times.

Suspended Loads: never walk under, stand or work under suspended loads. Attached tag lines to guide suspended loads.

Fire Protection: Know the location of fire extinguishers, their use and how they operate. Report missing, used or non-inspected fire extinguishers to your supervisor immediately. Only fight those fires you are sure of extinguishing. If in doubt, do not fight the fire.
First Aid and Safety Equipment

All mud logging units will be equipped with a basic first aid kit, a minimum of a 10 – 20 pound fire extinguisher, dust masks, and chemical protective equipment. The unit manager will, during each inspection check for first aid kid completeness, fire extinguisher condition, and the presence of face shield, goggles, rubber apron, and rubber gloves for chemical handling. If these items are not present, the unit manager will immediately notify the Operations Manager. The operations manager will arrange for replacement and/or refill of missing items and replacement of fire extinguishers and chemical protective equipment.

Sanitation:
The health of our employees often depends on the sanitation efforts they make at remote locations. Excrement both liquid and solid will be disposed of through septic systems. If this is not possible due to location conditions notify the Operations Manager so these conditions can be reported to the salesman for the client. These conditions will be reported via email or phone to the clients representative or contact person to resolve the problem.

The “behind the bushes” method of waste disposal is not recommended or permitted.

Trash will be removed from shops, offices, and mud logging units daily and placed in waste receptacles for disposal on a periodic basis.
Eating and cooking utensils will be washed after each use and the refrigerator sanitized prior to storage of foodstuffs.

Floors will be mopped at least once per day in logging units (it takes about 5–10 minutes) or more frequently when needed to remove mud and oil from the linoleum. Sinks, showers, and toilet bowls will be cleaned as needed, but not less than once per week.

Mattresses or the mattress covers will be disinfected upon crew or location changes.

**General Safety and Housekeeping**

Employees shall not attempt to do any work they cannot perform safely within the limits of their ability.

Any employee, who is unable to perform their duties safely, shall promptly notify their supervisor.

Study your job, the working conditions, and the location; know the hazards and how to protect yourself and your fellow employees from them.

Take an interest in new and inexperienced employees. Call their attention to unsafe practices and teach them the safe method of working and performing their duties.

Walkways, aisles, and work areas shall be kept free of tripping hazards.

Oil, grease, and water spills shall be immediately cleaned up.
Tools, equipment, and other materials shall be placed securely, where they will not fall.

Dirty rags shall be placed in flame retardant containers with their lids securely in place.

Employees shall clean and return all tools and materials to their proper place when finished with them.

Tools or equipment in need of repair shall be repaired or taken out of services and their condition reported to a supervisor.

Materials shall be stacked so the weight is evenly distributed and so it does not project into passageways. Heavier materials shall be placed on or near ground or floor level.

Material storage areas shall be kept orderly. Scrap and junk materials shall be disposed of properly and promptly.

Oils, grease, paints, and other flammable liquids and gases shall be labeled, and properly stored in approved containers.

**PERSONAL PROTECTIVE EQUIPMENT**

Clothing: Good health is a prime necessity for every employee. Therefore every employee will be required to provide and wear clothing which will provide sufficient protection for all types of weather conditions.
Do not wear clothing such as baggy, dragging pants, pants with cuffs, or loose or torn clothing that could get caught in machinery or otherwise cause an accident. Outer garments will be worn at all times and must cover the trunk, shoulders, and legs down to the ankles. Rings and other jewelry which could get caught in machinery or connect with electrical circuits shall not be worn when working with machinery or electrical circuits.

Hard Hats: All Toledo Mudlogging employees must provide their own hard hats. Hard hats should be worn at all times on locations, except when inside living quarters, vehicles, or offices. It is recommended that the hardhat be constructed of plastic, double cushioned against shock and of a style that provides maximum protection of head, nose, ears, and neck. They shall meet the requirements of ANSI Z89.1, Class A and ANSI Z89.2, Class B. Aluminum hats do not meet the non-conductor requirements of electricity as stipulated above and shall not be worn around electrical equipment or on location where there is a potential for contact with electrical wiring.

Foot Protection: All Toledo Mudlogging employees must provide their own safety-toed shoes. Safety toed shoes shall be worn on location except while inside the living quarters. Safety shoes/boots should have a firm gripping sole and heel tread that is made of puncture, chemical, and moisture proof material and complies with the requirements of ANSI Z41.1. Athletic, jogging, tennis type toed shoes shall not be worn on location.
Gloves: Gloves protect your hands from cuts, bruises, and chemical burns. There are various styles, each designed for specific uses. You must wear the style that provides protection for the job you are doing at the time.

Pure rubber or neoprene gloves – wear when handling caustic or corrosive chemicals.

Cotton gloves are for use where contact with rough surfaces and wet materials may be encountered.

Electrician's rubber gloves are for use on electrical equipment. This type of work is not authorized for Toledo Mudlogging employees.

Eye and face protection: your eyes and face are your most precious possession. Wearing the proper protective equipment can prevent most eye injuries. The types to be worn are: goggles, face shields, and safety glasses.

Suitable eye and face protection devices that comply with ANSI Z 87.1 shall be worn whenever the work being performed could result in injury to the eyes from flying particles, splattering liquid, or harmful light rays.
Non-Prescription, safety glasses that meet the ANSI standard are required to be worn at all times on location.

All employees are required to wear goggles, a face shield, rubber gloves, and an apron when handling any material capable of damaging skin tissue, e.g. Hydrochloric Acid, protective equipment.

Other instances when eye protection is required:

Hammering pins, nails, connections, chain links, etc.
Breaking concrete, brick, or cast iron
Cleaning with chemical solutions, including caustic and acidic materials.
Cutting wire lines
Hammering or sledging on chisels, cold shuts, or bars
Grinding with abrasive wheels or devices
Scraping metal surfaces
When working at any other operations where there may be danger of flying particles striking or entering the eyes or where judgment deems necessary.

Anyone near others who are doing work which requires the use of goggles or a face shield shall wear the identical required eye protection.

Welders are to wear safety glasses (clear or colored) to protect their eyes from slag, sparks, and the flying particles when brushing, cleaning, grinding, cutting, sanding, sweeping, etc.
First aid and prevention of eye injury:

If your face is splashed when you are wearing goggles, wash before removing the goggles.

To prevent foreign materials on the external side of the goggles form entering you eyes when removing the goggles; remove your gloves, if any, slip your thumbs under the strap behind your head bend your body and head forward; raise the strap over the back of your head and let the goggles fall from your head.

If you receive a chemical splash on your face, go to a water station or fresh water sources and wash your face for at least (15) minutes.

If your goggles or safety glasses fog excessively, anti-fog compound should be applied to lens.

All eye protection devices shall fit properly and shall be maintained in a sanitary, usable, and serviceable condition.

Eye protection equipment shall be replaced when it becomes scratched, warped, or pitted in such a fashion as to interfere with the wearers vision.
Hearing Protection and Noise Hazards:

Toledo Mudlogging recognizes that noise exists in our remote workplaces as well as our shop.

While excess noise should not occur in our shop, we cannot be certain our employee will never be exposed to noise levels above 85 decibels.

To minimize the effects of excessive noise, each employee will be issued earplugs (or they will be stocked in the logging unit). They are to be worn when employees are working near drilling rig equipment on well locations. They are not required to be worn inside the mud logging unit, but trips to the mud pumps, mud shaker, or possum belly do require the use of ear protection.

An approved type of hearing protection (disposable ear plugs) furnished by Toledo Mudlogging shall be worn by all employees who are entering or working in a high noise level area above 80 decibels or above.

Plugs will reduce the noise reaching the ear by 25–30 decibels in the highest frequencies, which are the most harmful. Earmuffs provide greater protection and, while not furnished, are highly recommended.

Employees are encouraged to wear ear protection even when noise levels are within the acceptable limit or the noise sources is from other activity near the job area. This will reduce the noise, allow the employee to concentrate on the work being done and minimize th irritation from a noisy work place.
Fall Protection:

Safety Belts, Lanyards, climbing devices, and personal fall protection devices: Suitable fall protection devices securely attached to a proper anchor point shall be worn when climbing in areas where a fall could result in serious injury or death.

Because injuries can occur at slight elevations, employees should always consider using fall protection when climbing. The use of fall protection is absolutely required when the torso will be elevated more than six (6) feet above the working surface.

Respiratory protection: in the presence of harmful dust, vapors, fumes, mists, etc. suitable respirators shall be worn.

NIOSH approved paint mask respirators with appropriate filters shall be worn by employees who are involved in painting operations. Enclosed areas shall be well ventilated during painting operations.

Self contained breathing apparatus must be worn when harmful gases, such as H2S, are suspected or known to be present on location and when entering any space where oxygen deprivation is suspected or known to exist.
Lockout/Tagout

PURPOSE:

This procedure establishes the safety requirements for the lockout or tagout of energy isolating devices. It shall be used to ensure that all potential hazardous energy, and locked out or tagged out before employees perform any service or maintenance activities where the unexpected energizing, startup or release of stored energy could occur. Stored energy includes, but is not limited to: electricity, steam, energy, or water.

POLICY:

It is the policy of this company to assure that all energy sources are either locked out or tagged out prior to commencing work. The following procedure must be adhered to at all times.

RESPONSIBILITY:

It is the responsibility of each employee to secure the appropriate lockout/tagout device as required by the equipment to be locked out and to comply with all the instructions listed in this procedure. It is the responsibility of supervisors to strictly enforce adherence to all provisions of this procedure.
Definitions:

Energy isolating device: A mechanical device that physically prevents the transmission of release of energy. Including but not limited to the following:

1. A manually operated electrical circuit breaker, a slide gate, a slip blind, a line valve and any similar device used to block or isolate energy.

2. Energy Source: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, or other energy.

3. Capable of being locked out: An energy isolating device will be considered capable of being locked out if it is designed with a hasp or an attachment or has an integral part to which or through which a lock can be affixed, or has a locking mechanism built into it.

In addition any isolating device that can be secured by a lock affixed to it so it will not operate, will be considered capable of being locked out. Other energy isolating devices will be considered to be capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device.

4. Affected Employee: An employee whose job requires him/her to work on or near equipment that has been locked and/or tagged out initially by an unauthorized employee.
5. **Authorized Employee**: The employee who is directly responsible for the operation and condition of the equipment or machine, in most cases this will be an employee of the client or owner. The employee who initiates the lockout/tagout procedure. An authorized employee and an effected employee may be the same person when the authorized employees duties also include performing work on the machine or equipment which must be locked and/or tagged out under this procedure.

6. **Lockout**: The placement of a lockout device on an energy-isolating device. Ensuring that the energy isolating device and the equipment cannot be operated until the lockout device is removed.

7. **Lockout Device**: A device that utilizes a positive means such as a lock to hold an energy isolating device in a safe position and prevent the energizing of a energy source.

8. **Tagout**: The placement of a tagout device on an energy isolating device to indicate that the energy isolating device and the equipment being worked on may not be operated.

9. **Tagout Device**: A tag securely attached to an energy isolating device to give prominent warning that the energy isolating device and the equipment being worked on may no be operated. In addition a tagout device will also identify the owner of each lock if one is applied.
PROCEDURE:

A. Preparation:
   1. The authorized employee will determine when this procedure will be used in accordance with its intended purpose.
   2. Authorized employees will notify the affected employee(s) of the need to utilize this procedure.
   3. The authorized employee shall determine the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.

B. Equipment/machinery Lock and/or Tagout:
   1. The authorized (client or owner) employee will issue any work permits needed.
   2. If the machine or equipment is operating it will be shut down and/or blocked in by normal procedures, and all energy should be dissipated or restrained.
   3. The authorized employee will identify all energy isolating devices, and block, disconnect, etc. all energy isolating devices so as to prohibit the release of energy.
   4. The authorized employee will determine if the energy- isolating device is capable of being locked out. If so, locks and tagout devices will be used by all authorized and affected employees. If the energy isolating device is not capable of being locked out then all authorized and affected employees will attach a tagout device.
Chemical Hazards – Your right to know

The Hazardous Communication (Right to Know) program requires Toledo Mudlogging to inform you of the physical effects and health hazards from all known chemicals in your workplace.

In compliance with this requirement, Toledo Mudlogging, has established a Hazard Communication Plan. Copies of this plan augment the following information and is contained in the Toledo Mudlogging Policies and Procedures manual located in the main office and in each mudlogging unit.

This plan requires the labeling of all containers which contain such materials, you to understand and data contained in the Material Safety Data Sheets, and training on this matter.

The following is a short refresher.

All hazardous chemicals have one or more of the following characteristics:

Toxic

Corrosive
Ignitable

Reactive

Irritant

It is important for you to realize that drilling fluids, sample cleaning, and testing fluids have some of these properties.

If you ever have any questions about any chemicals you may be handling, please read the container label and the Hazard Communication Plan located in Toledo Mudlogging's office and in your mud-logging unit. The container labels must include: the names of chemicals in the container, appropriate hazard warnings using symbols or words which, in conjunction with the MSDS and the training provided, furnish employees with adequate information concerning the hazards and effects of the chemicals in the container.

The data sheets include current information and recommendations relative to the handling, storage, and utilization of hazardous chemicals. They also contain information relative to necessary use of personal protective equipment, toxicity data and any other hazards associated with the material. It is impossible to list all the hazards you will encounter on a well location in this handbook. Please ask the drilling or location foreman for copies of the MSDS for chemicals they have or are using.
Examples of chemicals used in Toledo Mudlogging operations are:

Silver Nitrate

Hydrochloric Acid

Solvents

When mixing any chemicals, always follow this rule: Mix the most active chemical (Hydrochloric Acid) into the lease active chemical (water). If this rule is reversed and the least active (water) is poured into the most active (Hydrochloric Acid), a violent explosion may result.

Yard, Shop and Field Operations

Lifting

Purpose: This section is designed to explain the potential for injury from improper lifting, discuss the physical stresses, warm-ups, and the proper lifting techniques. Physical lifting is one of the most hazardous activities undertaken in today's workplace. In general, individual employee's do not follow good lifting techniques when lifting any item.

General Guideline:
If at all possible, avoid lifting any heavy material. If the item to be lifted has handholds, use them.
Lifts should be kept between the knuckles (when standing upright) and the shoulders.
The lift should begin as close to the body as possible.
Avoid repetitive lifting tasks.
Do not lift and turn at the same time.

Lifting considerations:

Weight of item to be lifted. The weight of the item to be lifted should be of primary concern to any employee planning to physically lift something. The average man, in average shape, should be able to lift approximately fifty (50) pounds without adverse effects. However, no employee should assume this is a fixed rule.

Location of item to be lifted: The item to be lifted should be as close to the body as possible. When the arms are extended to grasp an object some distance from the torso, the effects of the weight is multiplied and creates a stress point in the lower back of the individual.

Strength and size of individual: The strength and size of the individual lifting the weight is relative to the weight of the object being lifted.

Warming up: Prior to lifting any object, take time to warm up your muscles. Lifting exerts pressure on your muscles. If they are cold, the risk of strain, sprain, or tearing is greater than if you have warmed and stretched them.
Testing: Kick the object to determine how much it weighs. If you can't move it with your foot, don't try to lift it.

Body Positioning: Get the load as close to the feet as possible. Stand in a stable position with feet pointing in the direction or the load. Life mostly by straightening the legs.

Posture: Keep the back as straight as possible. Don't twist or bend sideways.

**Hand Tools**

The proper tools, in good condition, shall be used for the job being done.

All tools and equipment must be inspected and maintained on a regular basis. All repairs and replacements shall be made promptly.

The use of aluminum hand tools is prohibited because they are easily bent.

Non-spark producing hand tools shall be used in known or suspected explosive atmospheres.
The wooden handles of hand tools shall be kept free of splinters and/or cracks and shall be kept tight in the tool.

Wrenches, including adjustable, pipes, end and socket shall not be used when jaws are sprung or worn to the point that slippage occurs.

Impact tools, such as drift pins, wedges, and chisels shall be kept free of mushroomed heads.

Hand tools shall never be left on ladders, stairs, or elevated places.

Employees shall not use cutting hand tools which have become dull.

Files will not be used without handles. Files shall be cleaned frequently with a file card and stored separately in a dry location.

Hand tools shall not be used after being subjected to extreme heat.

**Electrical Safety**

1. You are NOT an electrician. Only qualified and authorized employees are authorized to work on electrical equipment. If your unit needs electrical work, notify the Operations Foreman.
2. The following general electrical safety precautions must be observed.

Plug all power equipment into wall receptacles with power switches in the off position.

Do not drape power cords over hot pipes, radiators, or sharp objects.

Check the receptacles for missing or damaged parts. Do not plug equipment into defective receptacles.

Check for frayed, cracked or exposed wiring on equipment cords. Also check for defective cord clamps at locations where the power cord enters the equipment or attachment plug.

Extension cords should not be used in office area.

Cheater plugs should not be used. However, power strips with circuit breakers may be used for minor voltage demand electrical equipment.

Consumer electrical equipment should not be used if it is not properly grounded.

Personnel should know circuits in the circuit breaker panel that control power in their area. The circuit breaker panel should be marked to identify the circuits radiating from the panel box.
Temporary or permanent storage of any materials should not be allowed within 3 feet of any circuit breaker panel or electrical equipment.

When defective electrical equipment is identified, it must be removed from service, tagged immediately as dangerous to life and repaired as quickly as possible prior to being returned to service.

Any electrical equipment causing shocks or with high voltage leakage potential must be tagged with a “Dangerous Do Not Use” sign or the equivalent.

The mud-loging unit will be connected to power from the drilling rigs power generation unit through a cable connection on the mud-loging unit.

3. All mud-loging units must be grounded. The grounding of your unit may save your life.

Always insure you ground the unit using one of the following methods:
Direct grounding: a heavy-duty electrical cable capable of withstanding a minimum of 1500 volts shall attach a grounding wire attached to a grounding rod to the unit. The length of the grounding rod shall be at least 12 feet. The rod shall be driven into the ground, pointed end down, until the cable attachment lug nut is two inches above the ground.
Chemical grounding: an identical attachment is made to the unit with the same cable and length of ground rod. In this case, the rod is buried horizontally at a depth of one foot. Moist earth and chemicals are added to the soil over and around the grounding rod to maintain a constant electrical ground.

**Jacks**

Jacks shall not be loaded beyond their rated capacity.

Jacks shall be inspected before and after each use.

Jacks leaking hydraulic oil shall be removed from service.

Jacks shall be periodically lubricated as recommended by the manufacturer.

Jacks shall be used only on clean and level surfaces. In the field, support shall consist of hardwood boards or other items which cover an area at least three times the size of the jack base.
Metal to metal contact shall not be permitted between jack head and the load, except for floor jacks that are designed to prevent load shifting. A minimum of two (2") inch hardwood stock shall be used between the jack head and the load.

Wooden or metal extenders shall not be used to extend the jack's height.

All lifts shall be vertical with the jack centered under the load. When multiple jacks are used, each shall be positioned to equally share the total load.

Employees operating jack handles shall stand to one side.

After a load is raised, it shall be supported by substantial metal or wooden horses or stands or blocking.

When several jacks are used simultaneously on a load, the jacks shall be raised simultaneously to keep the load level.

**Ropes, chains and slings**

Body parts shall not be placed between ropes, chains or slings and their loads or other objects.
Wire rope slings shall be removed from service when six broken wires appear on one lay of rope or when three broken wires appear in one strand.

Chains and slings shall be kept clean.

Pad or protect chains and slings from abrasion on sharp edges of loads.

Inspect chains prior to use for bent links, cracks in welded areas, transverse nicks, and gouges, corrosion, pits and elongation caused by stretching.

**LP Gas**

Never fill a propane tank beyond 85% of its actual capacity. It may explode.

Determine if the tank actually needs more gas. Check the float gauge and outage gauge or weigh tank on scales.

If filling by use of outage valve, fill only until white vapor appears from the outage valve. If the tank is equipped with both outage valve and float gauge, stop filling when the gauge reads 85% or when the white vapor appears (which ever comes first).
If tank is not equipped with either an outage valve or a float gauge, then it must be filled by weight alone.

Never fill vehicle-mounted tanks when the vehicle is occupied.

Check as follows to verify that the tank or cylinder is legal and may be filled with LP gas.

No cylinder is to be filled that is beyond the retest date. All containers must be marked ICC (DOT) or ASME. All tanks ICC (DOT) or ASME must be equipped with a relief valve connected with the vapor space in the tank.

Extinguish all sources of ignition in filling radius, vehicle motors off, no open pilot flames, etc.

Employee filling the container will stand by the controls during the entire operation.

Entire filling operation will take place in open air.

**Forklifts**

Only authorized, trained, and qualified personnel shall operate forklifts.

Never change the forward or reverse travel without coming to a complete stop.

Never leave a forklift with its motor running. Always lower the forks to the floor or ground, shift into neutral, set the parking brake and turn the ignition off.
Avoid sudden starts and stops, particularly when carrying a load.

Do not ride the clutch.

Only the operator shall ride the forklift. No passengers.

If a forklift is used to elevate workers, a platform with handrails and a solid floor must be used.

Never carry personnel on loads or allow bystanders around loads being stacked.

Always drive slowly over bumps, rough and slippery surfaces.

While operating the forklift, always keep body parts inside the frame work of the forklift.

Before entering any truck, the forklift operator shall insure the truck's wheels are chocked and that the parking break is set.

The operators shall insure that the load does not exceed the capacity of the forklift.

Additional weight shall not be added to the counterweight.

Never leave loose objects on top of a load.
**Confined Space**

Confined space defined: A confined space is a space that:

Is large enough and so configured that an employee can bodily enter and perform assigned work and

Has limited or restricted means of entry and exit, and

Is not designed for continuous employee occupancy.

Confined space entry is an entrance into a space which meets the definition shown above through a manhole or other constricted opening including mud tanks or other areas.

Toledo Mudlogging employees should never have reason to enter a confined space.

**Welding**

Welding and cutting shall be performed in the welding area of the shop or outside the shop building.

Welding or cutting shall not be performed near flammable-vapors, liquids, dust or loose combustible materials.
Welders shall avoid working on wet surfaces, coming in contact with a ground surface, or working during periods of rain.

Materials shall not be cut in such a manner as to allow severed portions to fall on feet, legs, or other body part.

Care shall be taken when cutting on closed containers. The employees face shall be kept to one side while making these cuts.

Welders shall never weld or cut directly on a concrete floor.

Regulators shall not be forced onto or into a cylinder valve.

Creeping regulators shall not be used.

Back pressure regulators shall be installed at the regulator and preceding the torch on the acetylene–oxygen fuel system.

Hoses shall be frequently examined for leaks, worn places, and loose connections.
Friction lighters shall always be used. Never use matches or attempt to light or relight torches from hot metal.

Before starting operations all connections or electrical leads and/or hoses will be checked.

Welding shall not be conducted in a confined space.

Welding must not be directly watched without the proper eye protection.

Goggles with no. 5 or 6 shade lenses must be worn when the material is cut with Acetylene gas. Helpers engaged in such work should wear goggles with no. 3 or 4 shade lens.

Electric arc welding requires the use of welding helmets fitted with a no. 10 or darker shade lens. Helper in electrical welding must wear eye protection with a no. 9 or darker shade lens.

**Compressed Gas Cylinders**

Compressed gas cylinders shall always be secured by rope or chain when in an upright position. Except when the cylinder is in use, the protective cap shall always be in place.

All cylinders not in an upright position shall be blocked or secured to prevent rolling or movement. (Note Acetylene gas must ALWAYS be stored in an upright position).
Lifts should be kept between the knuckles (when standing upright) and the shoulders.
The lift should begin as close to the body as possible.
Avoid repetitive lifting tasks.
Do no lift and turn at the same time.

Lifting consideration:

Weight of item to be lifted: The weight of the item to be lifted should be of primary concern to any employee planning to physically lift something. The average man, in average shape, should be able to life approximately fifty (50) pounds without adverse effects. However, no employee should assume this is a fixed rule.

Location of item to be lifted: The item to be lifted should be as close to the body as possible. When the arms are extended to grasp on object some distance from the torso, the effects of the weight is multiplied and creates a stress point in the lower back of the individual.

Strength and size of individual: The strength and size of the individual lifting the weight is relative to the weight of the object being lifted.

Warming up: Prior to lifting any object, take time to warm up your muscles. Lifting exerts pressure on your muscles. If they are cold, the risk of strain.
Gasoline Handling and Use

Gasoline shall never be used for cleaning purposes.

Gasoline shall not be transported in other than approved containers, and these containers shall not be hauled inside of cars or the cabs of trucks.

Gasoline shall not be poured or handled around open or unprotected flames, electrical equipment, areas where sparks or static electricity may be present or in unventilated areas.

Gasoline shall not be stored in open, plastic or glass containers: in unventilated places, near sources of fire, near electrical equipment or outlets, or near combustible materials, such as cardboard boxes, paper, etc.

Gasoline shall not be siphoned by mouth from tanks or containers.

Gasoline shall not be used to start a diesel engine.

Hydrogen Sulfide (H2S)

The oil company shall determine Hydrogen Sulfide concentrations for each location. They will inform the operations manager and the mudlogger on site of the concentration present at the location. All operations shall be conducted under the presumption that H2S is present unless the area is know to be free of that gas.
Upon receiving information that H2S is present, the operations manager or mudlogging unit manager shall immediately request a copy of the oil company's evacuation plan and request/provide air packs from Toledo Mudlogging, Inc.

When a known H2S location is scheduled, employees assigned to that location shall be required to remove beards and sideburns to provide a face to mask seal on all self contained breathing apparatus.

Characteristics of H2S:

- Extremely poisonous (toxic)
- Heavier than air and colorless
- Odor or rotten eggs but only at low concentrations.
- Burns with a blue flame and produces Sulfur Dioxide (SO2) gas which is very irritating to eyes and lungs. SO2 is less toxic than H2S but can also cause serious injury or death.
- H2S forms explosive mixtures with air.
- H2S is soluble in oil and water.
Hazards of H2S

The sense of smell can not be depended on to detect H2S because H2S destroys the sense of smell (immediately at very high concentrations and within 2–15 minutes at low concentrations).

Produces irritation to eyes, throat and respiratory tract.

Strangulation may occur after a few seconds of exposure or death may occur from respiratory cardiac (heart) paralysis.

First Aid for H2S

Move the victim into fresh air at once. Never attempt to rescue a victim without first donning the appropriate breathing apparatus.

If victim in unconscious and not breathing, immediately perform CPR and continue it until normal breathing is restored.

Summon a doctor or deliver the patient to medical care as quickly as possible. Inform them of the need to understand and deliver H2S Therapy.

Employees with eardrums which have been punctured shall not be allowed to work in or be exposed to H2S.
Training requirements for H2S locations:

Selected employees will be trained in the use of appropriate breathing apparatus and will be trained in CPR.

The Oil Company evacuation and briefing plan will be followed during all drills and emergencies.

Toxicity table for H2S

<table>
<thead>
<tr>
<th>PPM</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.002</td>
<td>Detectable odor</td>
</tr>
<tr>
<td>to 1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Obvious and unpleasant odor, safe for up to 8 hours.</td>
</tr>
<tr>
<td>15</td>
<td>OSHA’s acceptable short-term exposure limit.</td>
</tr>
<tr>
<td>20</td>
<td>Notice: Safety Equipment is required. Contact your supervisor and the operations manager.</td>
</tr>
<tr>
<td>100</td>
<td>Kills sense of smell in 3–5 minutes, may sting eyes and throat.</td>
</tr>
<tr>
<td>200</td>
<td>Kills sense of smell shortly, still stings eyes and throat.</td>
</tr>
<tr>
<td>500</td>
<td>Lose sense of reasoning and balance. Respiratory disturbance in 2 to 15 minutes. Needs prompt artificial respiration.</td>
</tr>
<tr>
<td>700</td>
<td>Will become unconscious quickly.</td>
</tr>
</tbody>
</table>

**Breathing will stop and death will follow if not rescued promptly.**
Truck Drivers

As a professional driver, you are responsible for always operating your vehicles in the safest manner. Our customers and general public can readily observe your driving practices.

Your specific responsibilities include the following:

Know, follow and periodically review the requirements established by the states in which you drive.

Stay alert at all times when you are behind the wheel to ensure that your actions do not result in an accident for you or others.

Practice the techniques of defensive driving to ensure that the actions of another person do not result in an accident for your or cause you to take action which endangers or injures others.
Inspect your truck and the load you pull, before and after each trip. Report and have unsafe conditions repaired before driving the vehicle again.

Always remember driving safely is a job expectation.

Set the standard for other employees.

Safe Job Analysis

1. The safe job analysis form is provided to assist you in preparing for tasks which may involve hazards. It is designed to help you think about the work your are going to perform, the hazards associated with the work and actions you can take to reduce the risk you are facing.

2. The purpose of the job safety analysis form is to provide a guide which assists you in thinking of a task by each step you must take to complete the task. It should assist you to think of each step and the hazards that may accompany it.

3. Conducting a complete Job Safety Analysis of every job you assigned, will help you and other Toledo Mudlogging employees contribute to improving the safety and work performance of everyone.
DEFINITIONS

ACCIDENT – The National Safety Council defines an accident as an undesired event that results in personal injury or property damage.

INCIDENT – An incident is an unplanned, undesired event that adversely affects completion of a task.

NEAR MISS – Near misses describe incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

When do you conduct an investigation?

All incidents, whether a near miss or an actual injury-related event, should be investigated. Near miss reporting and investigation allow you to identify and control hazards before they cause a more serious incident. Accident/incident investigations are a tool for uncovering hazards that either were missed earlier or have managed to slip out of the controls planned for them. It is useful only when done with the aim of discovering every contributing factor to the accident/incident to "foolproof" the condition and/or activity and prevent future occurrences. In other words, your objective is to identify root causes, not to primarily set blame.
Who should investigate?

The usual investigator for all incidents is the supervisor in charge of the involved area and/or activity. Accident investigations represent a good way to involve employees in safety and health. Employee involvement will not only give you additional expertise and insight, but in the eyes of the workers, will lend credibility to the results. Employee involvement also benefits the involved employees by educating them on potential hazards, and the experience usually makes them believers in the importance of safety, thus strengthening the safety culture of the organization. The safety department or the person in charge of safety and health should participate in the investigation or review the investigative findings and recommendations. Many companies use a team or a subcommittee or the joint employee-management committee to investigate incidents involving serious injury or extensive property damage.

Training for incident investigation

No one should investigate incidents without appropriate accident investigation training. Many safety and health consultants and professional organizations provide this type of training. Before committing resources to training, you might want to check the course contents against the information found in the National Safety Council's pamphlet, "Accident Investigation ... A New Approach."
The investigative report should answer six key questions

Six key questions should be answered: who, what, when, where, why, and how. Fact should be distinguished from opinion, and both should be presented carefully and clearly. The report should include thorough interviews with everyone with any knowledge of the incident. A good investigation is likely to reveal several contributing factors, and it probably will recommend several preventive actions.

You will want to avoid the trap of laying sole blame on the injured employee. Even if injured workers openly blame themselves for making a mistake or not following prescribed procedures, the accident investigator must not be satisfied that all contributing causes have been identified. The error made by the employee may not be even the most important contributing cause. The employee who has not followed prescribed procedures may have been encouraged directly or indirectly by a supervisor or production quotas to "cut corners." The prescribed procedures may not be practical, or even safe, in the eyes of the employee(s). Sometimes where elaborate and difficult procedures are required, engineering redesign might be a better answer. In such cases, management errors -- not employee error -- may be the most important contributing causes.

All supervisors and others who investigate incidents should be held accountable for describing causes carefully and clearly. When reviewing accident investigation reports, the safety department or in-house safety expert should be on the lookout for catch-phrases, for example, "Employee did not plan job properly." While such a statement may suggest an underlying problem with this worker, it is not conducive to identifying all
possible causes, preventions, and controls. Certainly, it is too late to plan a job when the employee is about to do it. Further, it is unlikely that safe work will always result when each employee is expected to plan procedures alone.

Implications of accident investigations

Recommended preventive actions should make it very difficult, if not impossible, for the incident to recur. The investigative report should list all the ways to "foolproof" the condition or activity. Considerations of cost or engineering should not enter at this stage. The primary purpose of accident investigations is to prevent future occurrences. Beyond this immediate purpose, the information obtained through the investigation should be used to update and revise the inventory of hazards, and/or the program for hazard prevention and control. For example, the Job Safety Analysis should be revised and employees retrained to the extent that it fully reflects the recommendations made by an incident report. Implications from the root causes of the accident need to be analyzed for their impact on all other operations and procedures.
Accident/Incident/Near Miss Investigation Guidelines

One of the best ways to avoid further accidents is to understand how an accident occurred and how to avoid that type of accident in the future. The accident investigation is a tool.

*The goal is not to lay blame.*

The goal in an accident investigation is to:

- Satisfy legal requirements (National Institute for Occupational Safety and Health?NIOSH, and Occupational Safety and Health Administration?OSHA)
- Find out what happened and determine immediate and underlying or root causes.
- Rethink the safety hazard.
- Introduce ways to prevent a recurrence
- Establish training needs.

An accident, a near miss and an incident should all be investigated.

- Accident investigations are a tool for uncovering hazards that either were missed earlier or require new controls (policies, procedures or personal protective equipment).
- Near-miss reporting and investigation identify and control safety or health hazards before they cause a more serious incident.
- Incident investigations should focus on prevention.

**ACCIDENT** — an undesired event or sequence of events causing injury, ill-health or property damage.

**NEAR MISS** — near misses describe incidents where, given a slight shift in time or distance, injury, ill-health or damage easily could have occurred, but didn't this round.

**INCIDENT** — an incident is an unplanned, undesired event that hinders completion of a task and may cause injury or other damage.

**Recommendations**

- Conduct an investigation as soon as possible following the event to gather all the necessary facts, determine the true causes of the event, and develop recommendations to prevent a recurrence.
- Get there as quickly as possible.
• Ensure area is safe to enter.
• Make sure injured person has first-aid or medical attention required.
• Look for witnesses.
• Record the scene with photos (ideally date and time printed) or sketches.
• Safeguard any evidence.
• Establish what happened.

Equipment that may come in handy:

• Pens and notebook
• Measuring tape
• Specimen containers
• Camera and film
• Tape recorder and cassettes
• Copies of accident report forms, checklists
• Telephone numbers
• Personal protective equipment

Investigate

The investigation should answer six questions:

• Who?
• What?
• When?
• Where?
• Why?
• How?

Interview

Interview all people involved. Look for all the causes. Do not fall into the trap of blaming the employee or volunteer, even if the person admits causing the event. Investigate the procedures, supervisor’s directives, training, machinery, weather, you get the idea. The organization’s accident, incident and near-miss reporting forms will give guidance.

Document
Properly document all accident investigations using the organization's approved investigation form. The form should make it simple to remember what questions to ask, be easy to understand and complete, and be filed and retained in chronological order.

**Protect Privacy**
Investigation reports are not to be released to anyone without authorization.

**Review**
Review all accident, incident and near-miss investigations occurring since the last safety committee meeting at the next safety meeting.
ACCIDENT INVESTIGATION PROCEDURES

The senior staff member available at the accident scene or the first member notified should complete the appropriate investigation reporting form (accident, incident, near miss). The completed form should be given to the organization's safety committee, which will forward a copy of the report to the safety coordinator for review.

When an employee or volunteer is injured:

1. Get the person professional medical attention.
2. Protect others.
3. Minimize property damage.
4. Stabilize the situation.
5. Conduct an investigation.

General guidelines for investigating accidents:

- Go to the scene of the accident while the facts are fresh.
- Inspect and record any changed physical characteristics or conditions of the accident site.
- Preserve any physical evidence, such as potentially defective equipment.
- Take photos to help preserve the scene (i.e., puddles on the floor, overturned storage shelves and spilled contents).
- Talk to the injured person, if possible.
- Talk to any eyewitnesses.
- Ask simple open-ended questions, one question at a time, and attempt to have events related chronologically to ensure thorough coverage.
- Distinguish a person's actual knowledge from hearsay.
- Ask when, where, who, how, and what was said or done.
- Avoid opinions, judgments or conclusions and be as objective as possible.
- Avoid commenting on the information gathered except to confirm your understanding or to clarify.
- Stress getting the facts.
- Do not comment on liability or fault during the investigation. Listen for clues in the conversation around you.
- Unsolicited comments often have merit.
- Review and finalize any notes immediately upon completion of your inspection and any interview or other communication with those involved.
- Fill out the appropriate accident, incident or near-miss form,
giving an accurate account of the facts.

- Send the form to the safety coordinator and safety committee for their review.

**Reporting Near Miss**

Date: ________________

Department: __________________________________________

Company: ____________________________________________

Name of employee: ____________________________________

Name of Supervisor: ____________________________________

Nature of incident: ____________________________________

________________________________________________________________________

________________________________________________________________________

Why was this incident considered a “near miss”?: __________

________________________________________________________________________

________________________________________________________________________

Was the employee or contractor counseled/reprimanded? _____

________________________________________________________________________

Why or why not?: _______________________________________

________________________________________________________________________

Remedial activities or training recommended: _____________

________________________________________________________________________
Supervisor: ________________  Employee: ________________

**Safety Violations Report**  
**Date:** ________________

**Department:** ______________________________________________________

**Company:** _________________________________________________________

**Name of employee:** ________________________________________________

**Name of Supervisor:** ______________________________________________

**Nature of violation:** ________________________________________________

_____________________________________________________________________

**Consequences for this violation:** ________________________________

**Why was this incident considered a “violation”?** ________________

_____________________________________________________________________

**Was the employee or contractor counseled/reprimanded?** ______

_____________________________________________________________________

**Why or why not?** _________________________________________________

_____________________________________________________________________

**Remedial activities or training recommended:** ________________

_____________________________________________________________________
Supervisor: ________________  Employee: ________________

**Accident Investigation**

To be sent to: Toledo Mudlogging, Inc.
Ph: 318–590–9755       Fax: 318–590–9754

Date of Accident/Occurrence: ____________  Time: ____________

Place of Accident/Occurrence: _______________________________

Name of injured person(s) (if any): __________________________

1. Was/were any other person(s) involved in, or witness to, the accident? If so give employee(s) names(s), titles, departments, phone numbers; if not an employee, record name, company, phone number:

2. Was/were the person(s) involved appropriately trained and authorized? Give brief details of relevant training and authorization:
3. Are there any written rules or other instructions applicable to the work? If so give brief details:

4. Was there any apparent breach of rules or instructions, or any apparent malpractice? If so, give details:

5. Supervisor's additional comments:

________________________________________
Supervisor's signature                                Date
6. Do you endorse the supervisor’s replies to Parts 1 to 5? If not, what would you alter, delete or add?

7. Is there any need to modify or add to existing rules or instructions? If so, what modification or addition needs to be made?

8. Has the investigation identified any training need? If so, give details:

9. What action have you taken in respect of this accident?

10. Do you see any need for preventative action outside your department? If so, give details of the action and other departments concerned:

____________________________________________________________________________________

Manager’s signature                                      Date
Accident Investigation

Name of injured employee/contractor __________________________

Date of accident __________________________

Job Title __________________________ Time of accident ________

Department __________________________

Location of Accident __________________________

Name of Witness(s) __________________________

________________________________________

________________________________________

Description of Accident __________________________

________________________________________

________________________________________

________________________________________

________________________________________

Task being performed __________________________

________________________________________

Equipment, Tools, Personal Protective Equipment, Procedures

Being Used __________________________

________________________________________

________________________________________

Description of Injury/Illness (include accident type, injury type

and body part injured __________________________

________________________________________

________________________________________

________________________________________
Describe All Contributing Factors

Description of work area

Injured Employee/Contractor Account of Accident

Witnesses Account of Accident (Name, title, address, phone number)

What Were the Basic causes of the Accident (usually multiple causes)

Corrective Measures to be implemented to Prevent Similar Recurrence

Investigator’s Name

Date of Investigation
Severe Accident Investigations
This form should be used to gather information when conducting the investigation of a severe accident.

ANSWERS: YES – NO – N/A

Questions
Section 1 --- Task
Was a safe work procedure used?

Had conditions changed to make the normal procedure unsafe?

Were the appropriate tools and materials available?

Were the appropriate tools and materials used?

Was the equipment involved designed for the task?

Should another type of equipment be used for the task performed?

Were safety devices working properly?

Was “lock out” used when necessary?

Section 2 --- Equipment and Material
Was there an equipment failure? If yes then explain below:
Was the machinery poorly designed?

Is this machine equipped with guards?

Are the guards functioning properly?

Has the machine been maintained?

Were hazards substances involved?

Were they clearly identified?

Was a less hazardous alternative substance possible and available? If yes then explain.

Was the raw material substandard in some way?

Should personal protective equipment (PPE) have been used?

Was the PPE used?

**Section 3 --- Environment**

What were the weather conditions?

Was poor housekeeping a problem?
Was it too hot or cold?

Was noise a problem?

Was there adequate light?

Were toxic or hazardous gases, dusts, or fumes present?

**Section 4 --- Personnel**

Were workers experienced in the work being done?

Had they been adequately trained? Documented?

Can they physically do the work?

Clarification of Section 4

**Section 5 --- Management**

Were safety rules communicated to and understood by all employees/contractors?

Were written procedures available?

Were they being enforced?

Was there adequate supervision?
Had hazards been previously identified?

Had procedures been developed to overcome them?

Were unsafe conditions corrected?

Was regular maintenance of equipment carried out?

Were regular safety inspections carried out?

Where was the supervisor at the time of the accident?

What was the supervisor doing at the time of the accident?

What did you see? Hear?

In your opinion, what caused the accident?

How might similar accidents be prevented in the future?
<table>
<thead>
<tr>
<th>Accident Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident Evaluation</td>
</tr>
<tr>
<td>Date ________________</td>
</tr>
<tr>
<td>Employee ____________________________</td>
</tr>
<tr>
<td>Department ____________________________</td>
</tr>
<tr>
<td>Type ____________________________</td>
</tr>
<tr>
<td>Injuries ____________________________</td>
</tr>
<tr>
<td>Medical Cost ____________________________</td>
</tr>
<tr>
<td>Report for ________ to ________ 20__</td>
</tr>
</tbody>
</table>

Notes: ____________________________

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Supervisor ____________________________ Date: ________________

Employee ____________________________ Date: ________________
Accident Investigation

Vehicular

Date of the accident _______________________

Name of individual(s) involved ____________________________

__________________________________________________________________________

Employment status (i.e., employee/contractor): ________________

Place of the accident (location, street address/intersection, or any other location description) ____________________________

__________________________________________________________________________

What happened: ____________________________

__________________________________________________________________________

Vehicles or equipment involved: ____________________________

__________________________________________________________________________

Weather conditions: ____________________________

Was law enforcement involved? Citation(s) issued? Nature of violation? ____________________________

__________________________________________________________________________

Injuries: ____________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Injury</th>
<th>Hospitalized</th>
<th>W/C Claim?</th>
</tr>
</thead>
<tbody>
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</table>

Damage to property ____________________________

Witness Name       Address       Phone
Incident or Accident Investigation

Toledo Mudlogging, Inc.
171 Mount Olive Road     Many, LA 71449
Ph: 318–590–9755 Fax: 318–590–9754

PARTICULARS OF ACCIDENT

Date of accident: ________________
Mon  Tues  Wed  Thur  Fri  Sat  Sun  (circle appropriate day)
Time  Location  Date reported

Reported to: _____________________ How: _______________

THE INJURED PERSON

Name:
Address:
Age:
Phone number:
Date of accident:
Length of employment:
Length of time on this job:

TYPE OF INJURY
Strain/sprain:
Fracture:
Laceration/cut:
Bruising:
Scratch/abrasion:
Amputation:
Burn scald:
Dislocation:
Foreign body:
Internal:
Chemical reaction:
Other (specify):

Remarks: ______________________________________
______________________________________________
______________________________________________
______________________________________________
______________________________________________

Injured part of body (e.g., head, back, groin, leg, arm, wrist) _____
______________________________________________
______________________________________________
______________________________________________
______________________________________________

DAMAGED PROPERTY
Property/material damaged:
Nature of damage:
Object/substance inflicting damage:
THE ACCIDENT

Description
Describe what happened (space on back for diagram/essential for all vehicle accidents):

Analysis
What were the causes of the accident?

How bad could it have been?
Very Serious  Serious  Minor

What is the chance of it happening again:
Minor  Occasional  Rare

Prevention
What action has or will be taken to prevent a recurrence?
By whom:  When:

Check off items already in effect.
TREATMENT AND INVESTIGATION OF ACCIDENT

Type of treatment given

Name of person giving first aid:

Doctor/Hospital:

Accident investigation by:

Date:

OSHA advised: YES NO

Date notified:
I, ___________________________ on _____ / _____ / 20____
certify that I have received a copy of the Toledo Mudlogging, Inc
“EMPLOYEE SAFETY AND HEALTH HANDBOOK”.

I agree to read and comply with the recommendations and
guidelines set forth in this handbook.

I agree to report and document near miss, safety violations,
incidents, and injuries with the appropriate documentation which
is available in this handbook.

I agree to report any reportable incidents to the management of
Toledo Mudlogging, Inc.

I agree to contribute to having a safe work place for myself and
co–workers to help prevent work place incidents.

Employee: ___________________________ Date: ____________

Supervisor: ___________________________ Date: ____________
1. True
2. True
3. True
4. False
5. False
6. True
7. False
8. True
9. False
10. True