## **GEO-LINK**

### **SAFETY MANUAL**



**2015 EDITION** 

Nick Hinojosa

#### **TABLE OF CONTENTS**

SECTION	SUBJECT	PAGE	
l	Safety Managementő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő	5 5 6 6 6 5 6 5 7 7	
II	II General Safety Rules õõõõõõõõõõõõõõõõõõõõõõõõ		
	Alcohol, Drugs, Firearms, Weapons, Explosivesõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõ	5 10 5 11 5 .11	
III	$\textbf{Transportation} \ \tilde{0} \ \tilde$	13	
	Vehiclesõõõõõõõõõõõõõõõõõõõõõõõõõõõõõõ	.14	
	Trailersõõõõõõõõõõõõõõõõõõõõõõõõõõõ		
	Accident Reportingõõõõõõõõõõõõõõõõõõõõõõõ		
IV	Personal Safetyõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ	.18 19 19 19 20 20 20	
V	Worksite Safetyő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő		
	MSDSő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő ő	. 23 23 5 24 25 26 27	

	Storing Cylindersõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Chemical and Hazardous Materialsõ õ õ õ õ28
	General Precautionsõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Personal Protective Equipmentő ő ő ő ő ő ő ő ő ő ő 28
	Waste Disposalõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ a õ
	Transportationo o o o o o o o o o o o o o o o o o o
	Hydrogen Sulfide $(H_2S)\tilde{o}$ $\tilde{o}$
	Physical Characteristicsõ õ õ õ õ õ õ õ õ õ a29
	Toxicityõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Safety Precautionsõ õ õ õ õ õ õ õ õ õ õ õ a31
	Respiratorsõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Environmental Protectiono o o o o o o o o o o o o o o o o o o
	Biological hazardsõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
VI	Fire Prevention and Protection $\tilde{0}$ $\tilde{0}$ $\tilde{0}$ $\tilde{0}$ $\tilde{0}$ $\tilde{0}$
	Fire Preventiono o o o o o o o o o o o o o o o o o o
	Fire Protectionõõõõõõõõõõõõõõõõõõõõõ
	Introduction $\tilde{o}$
	Classification
	Fire Extinguishersõõõõõõõõõõõõõõõõõõõã37 Response Proceduresõõõõõõõõõõõõõõõ
VII	Hazard Communication Programõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Introduction o o o o o o o o o o o o o o o o o o
	Trainingõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
VIII	Terrorism Awareness Programõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ a
	Introduction o o o o o o o o o o o o o o o o o o
IX	Emergency Proceduresõ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ õ
	Introduction õõõõõõõõõõõõõõõõõõõõõõ
	Injuries and Injury Reportingõõõõõõõõõõõõõõõ
	Safety Stand-Down Policyõ õ õ õ õ õ õ õ õ a45
	First Aid/Blood borne Pathogensõ õ õ õ õ õ õ õ õ õ õ å46
X	Safety Manual Confirmation 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
XI XII	Program Confirmations         0
ΛII	FUIIISU U U U U U U U U U U U U U U U U U

## **SECTION I**

## **SAFETY MANAGEMENT**



#### SAFETY PHILOSOPHY

Safety is of primary importance in the daily operations of Geo-Link. It is our policy that all company operations should be conducted in a manner which protects the health and safety of our employees and the environment as well. Our goals in safety are no harm to the environment, no harm to people, and no accidents.

We have historically stressed that each employee must make his or her individual safety and the safety of co-workers fundamental concerns. As a company, Geo-Link is committed to implementing policies and procedures that will enable employees to take this responsibility.

We believe that a safe working environment has certain indispensable ingredients: Management commitment, knowledgeable training personnel, and a conscientious work force in which every individual is dedicated to the principle that accident prevention is an essential part of the planning and efficient execution of every assignment.

This safety manual, a product of management's on-going commitment to safety, is a tool to use in the continuance of our excellent safety record. It serves as a guide and reference in maintaining and enforcing our continued commitment to our world, our environment, and the health and safety of our valued employees.

#### **SAFETY RESPONSIBILITIES**

The responsibility for safety is two-fold; it lies with management and employees / independent contractors.

Geo-Link management recognizes the need for an effective safety program which reflects company policy and ensures that safety, occupational health, and accident prevention are matters of high priority in its operations. Therefore the management of Geo-Link shall:

- Provide general and job-specific safety and operations training.
- Provide equipment that is maintained in safe running condition and is regularly inspected to ensure safe, continued operation.
- Set safe examples in all aspects of its operations.
- Strictly enforce safety rules and standards and all applicable local, state, and federal regulatory requirements.
- Promptly correct unsafe conditions or hazardous situations through repairs, modifications, or procedural changes.
- Hold employees / independent contractors accountable for safety practice through annual performance reviews, counseling, or disciplinary action.
- Furnish field personnel with appropriate personal protection equipment before reporting to a client's location.
- Insure that all field personnel follow any additional safety rules a client may have.

Geo-Link personnel - whether employees or independent contractors - must also recognize their role in safety. This role should involve a responsible attitude for personal safety and the welfare of fellow workers. It is critical to the success of our safety program that all personnel have as their goal the concept that all injuries can be prevented. It is, therefore, your responsibility as Geo-Link personnel to:

- Come to work physically able to perform your job.
- Know and perform your work according to the rules and guidelines set forth in this manual.
- Obey all warning signs at the job site, particularly those which require the use of personal protective equipment (PPE).
- Identify and correct hazardous situations or unsafe equipment, if it is in your ability and authority to do so. Report such situations and corrections to the Geo-Link Safety Officer and upper management.
- Immediately report to the Geo-Link Safety Officer and upper management any accidents (including near misses) or hazardous situations which you detect and are unable to correct.
- Attend a daily safety meeting
- Geo-Link is committed to environmental sustainability best practices, Geo-Link asks that all employees use best practices when dealing with all environmental factors in the workplace

#### SAFETY ADMINISTRATION

#### **ORGANIZATIONAL STRUCTURE**

Geo-Link has a Safety Officer who is responsible for safety training of new hires, safety meetings, and accident reports and investigation. This individual reports directly to the Geo-Link President on all safety issues. Geo-Link management will conduct yearly safety audits and personnel reviews for all employees.

Unit Supervisors (lead persons) are responsible for safety matters in the field, including field training and supervision of new hires. They are also responsible for immediately reporting any unsafe practices, hazardous conditions, and accidents to the Operations Manager, the Safety Officer, and, if appropriate, to the client's representative on site. All safety documents should be emailed to the following members of the Geo-Link management team.

#### **GEO-LINK MANAGEMENT CONTACT INFORMATION**

President: Rob Adams, phone: 307-321-1291 email: r.adams@geo-link.net

Operations Manager: Jed Adams, phone: 307-321-0320 email: j adams@geo-link.net

**Safety Team:** Nick Hinojosa, phone: xxx-xxx email: n.hinojosa@geo-link.net **Safety Team:** Denise Adams, phone: 317-514-7686 email: d.adams@geo-link.net

**Safety Team:** Mike Pilati, phone: 406-425-0736 email: <a href="mailto:m.pilati@geo-link.net">m.pilati@geo-link.net</a> **Safety Team:** Jack Gribble, phone: 406-446-3654 email: <a href="mailto:j.gribble@geo-link.net">j.gribble@geo-link.net</a>

#### **TRAINING**

All new Geo-Link personnel, including independent contractors, shall be given a copy of the Geo-Link Safety Manual and be given a time limit, normally one week, in which to read it. The "acknowledgment of understanding and agreement" page shall be signed and filed with the individual's employment records. Training records for employees are kept for a duration of no less than three years.

At the time of initial hiring, the Geo-Link Safety Officer shall provide the new employee with comprehensive safety orientation including, but not necessarily limited to:

- Specific instructions regarding all equipment to be operated, the hazards involved, and the precautionary measures required.
- General safety rules and personal protective equipment required.
- Emergency measures including use of fire protection equipment, first aid kits, and emergency procedures (Geo-Link issued as well as site specific)
- Employee's responsibility to identify and correct unsafe practices or conditions.
- Employee's responsibility to report all incidents, near misses, and injuries no matter how minor. Reporting near misses is stressed since management is thereby alerted to potential problems and can act to prevent accidents.
- Geo-Link policy regarding the use or possession of alcoholic beverages, illegal drugs, firearms, and other weapons.

Identical orientation shall be provided for independent contractors who perform field work for Geo-Link.

#### **SAFETY MEETINGS**

Daily safety meetings are required and essential to the success of any safety program and are designed to encourage feedback. Employee input is necessary for our safety program to continually evolve and improve. Records of daily safety meetings should be emailed to the above listed members of the Geo-Link management team.

At the beginning of a new field assignment, the Unit Supervisor will hold a tail gate meeting to reinforce general safety practices and generate a Job Safety Analysis (JSA) which will be applicable to that particular assignment. Additional tailgate meetings will be held to complete a JSA at the conclusion of a project.

#### **MANAGEMENT OF CHANGE**

This part of the Geo-Link safety policy establishes the correct process for ensuring safety when dealing with changes or modifications in the workplace/jobsite. All changes in procedures or processes will be communicated from the Company President to supervisors and from there to employees affected by the changes. The management of change form is located at the end of this safety manual.

#### **BEHAVIOR BASED SAFETY**

As a further effort to ensure that all Geo-Link employees are focused on safety, Geo-link follows a behavior based safety model as part of its overall safety program. The form the Geo-Link Behavior Based Safety initiative takes is that of a stop card program. All Geo-Link employees are responsible for identifying safety hazards on work locations and using the stop card program to identify and correct safety hazards. The Behavior Based Safety stop card program works as follows:

- Each employee will fill out one stop card per rotation in the field
- Geo-Link upper management will periodically review stop cards and recognize the best two cards on a quarterly basis
- As an incentive to employees the authors of the two recognized stop cards per quarter will be awarded a safety prize to be determined by Geo-Link upper management.

## SECTION II GENERAL SAFETY RULES



#### ALCOHOL, DRUGS, FIREARMS, WEAPONS, EXPLOSIVES

The nature of oil and gas exploration is such that potential for injury is always present in field operations. It is of utmost importance that all personnel working for Geo-Link, whether employees or independent contractors, have full control of their mental and physical faculties.

Alcohol and/or drugs cause impairment of these faculties and contribute to the frequency of accidents. Because the adverse effects of alcohol and/or drugs can last for hours and in some cases days, it is potentially unsafe for anyone to be at a work location with these substances in his/her system.

The use or possession of alcoholic beverages, illegal or unauthorized drugs, drug paraphernalia, weapons (including any type of pocketknives), firearms, explosives or pyrotechnic devices, and ammunition while engaged in Geo-Link business or in Geo-Link vehicles is strictly prohibited. Furthermore, no Geo-Link personnel shall report to work under the influence of alcohol or illegal/unauthorized drugs.

For the purpose of this rule the term "unauthorized drugs" shall mean any substance other than an "authorized drug", which is, or has the effect on the human body of being a narcotic, depressant, stimulant, hypnotic, hallucinogen or cannabinoid, their precursors, derivatives or analogues, and includes but is not limited to those substances pursuant to the Federal Controlled Substances Act. "Authorized drugs" are substances that are lawfully prescribed or available without prescription, lawfully obtained by the person in possession of them, and used by that person in an appropriate manner according to the dosages and for the purposes which the substances were prescribed or manufactured.

Failure to comply with this policy and its intent will result in disciplinary action up to and including termination.

#### **SMOKING**

Crude oil and natural gas are flammable materials, so, on most drilling locations, smoking is prohibited except in specially designated smoking areas. Geo-Link personnel are required to observe *all* smoking regulations in effect at a job site. Smoking inside Geo-Link field units is prohibited.

Geo-Link personnel should take precautions to avoid lighting up in a "No Smoking" area. They should also follow these rules concerning smoking safety:

- 1 Do not smoke in the following areas regardless of whether or not a "No Smoking" sign is displayed:
  - a. Inside guy line area on drilling rigs.
  - b. Within 150 feet of any wellhead or source of combustible or flammable vapor or liquid.
  - c. Highly flammable material storage and use areas.

- d. Warehouse or other storage areas.
- e. Any area containing equipment sensitive to smoke.
- **2** Do not carry matches and cigarette lighters into any area where there may be an explosive atmosphere.
- 3 Do not throw smoking materials on the ground or floor of a work area. Utilize non-combustible smoking receptacles at all times.
- 4 If you are not positive that the immediate area is safe for smoking DO NOT SMOKE!

Smoking outside approved, designated areas is grounds for disciplinary action up to and including termination.

#### PERSONNEL ACTIONS

Because of the inherent potential for accident or injury in drilling operations, Geo-Link personnel should observe the following guidelines while on a job location.

- **1** Do not wrestle, fight, have strength contests, play practical jokes, or engage in horseplay on the job or job premises.
- **2** Do not run in work areas except for emergency purposes.
- 3 Do not operate equipment for which you are not trained.
- **4** When ascending or descending stairways, use the handrail and take only one step at a time. Use the three point of contact rule.
- **5** Climbing or standing on equipment, piping, or valves is prohibited.
- 6 Observe all warning signs, particularly those that require the use of personal protective equipment.

#### **WORKPLACE VIOLENCE**

There are four categories of workplace violence: Personal Relationships, Strangers, Client/customers, and Coworkers. Be aware of conditions that might result in violence. Be aware of people who have a history of violence, swift and drastic changes in mood, personal hardships, and mental health issues, or have made verbal threats of violence. Please alert your supervisor as soon as there is any sign of violent or suspicious behavior. Geo-Link has a zero tolerance policy regarding violence and harassment (including sexual harassment). This includes ethnic, racial, or religious remarks, sexual harassment, offensive jokes, graffiti, profanity, offensive material, excessive noise, and any other behavior that may constitute harassment.

#### COMMUNICATION

Because personnel safety is one of the highest priorities in all drilling operations, everyone on a drilling location must be willing to work together to achieve that goal. Communication is fundamental to this process. The following guidelines shall be followed by all Geo-Link field personnel.

1 Immediately report all injuries and/or incidents, including near misses, to the Geo-Link

- Safety Officer, Geo-Link upper management, and the client's on-site representative.
- 2 Immediately report any unsafe condition or practice to the Geo-Link Safety Officer, Geo-Link upper management, and the client's on-site representative and tool pusher.
- **3** Report all fires, leaks, and spills of **any** size to the Geo-Link Safety Officer, Geo-Link upper management, and the client's on-site representative immediately.
- 4 Initial reports may be verbal. However, written reports should be submitted to the Geo-Link Safety Officer and Geo-Link upper management within 48 hours. Written reports will also be submitted to the client's on-site representative or other designated party as required.

## **SECTION III**

## **TRANSPORTATION**



#### **VEHICLES**

One of the important responsibilities of Geo-Link personnel is the safe operation of company vehicles. The following rules are included to help reduce vehicle accidents and prevent personal injury.

- All Geo-Link personnel driving a company vehicle shall have a valid driver's license for that type of vehicle.
- Operation of a company vehicle by other than approved Geo-Link personnel is strictly prohibited.
- No one under the influence of intoxicating beverages or drugs is allowed to operate a company vehicle.
- Company vehicles shall be operated in strict accordance with the traffic laws, ordinances, and regulations of the state, city, town, village, or Indian reservation in which they are being driven.
- All cell phone use is prohibited while operating any company vehicle. Geo-Link has zero tolerance for cell phone use in a company vehicle.
- Seatbelts shall be used by all occupants of company vehicles at all times.
- Vehicles shall be operated responsibly and at lawful/reasonable speeds at all times.
   Conditions of existing roads dictate the speed at which a vehicle can be operated safely.
- Vehicles should always be backed in when parked, whether on location or elsewhere.
- The driver of a company vehicle is responsible for the condition of that vehicle and shall regularly inspect it during field use to assure that it is in good mechanical condition and properly equipped. Timely vehicle maintenance is of utmost importance. Heavy field use of company vehicles necessitates frequent checks of oil and coolant levels as well as frequent air filter and battery checks. Alternator and fan belts should be checked periodically for correct tension, cracking, or glazing. Engine oil and oil filter should be changed every 3000 miles. During extended use in the field, the driver is responsible for oil changes.
- At the conclusion of a job, the driver of a company vehicle shall return it to the Geo-Link yard in a clean condition and report to the Operations Manager any needed maintenance and/or any maintenance performed in the field in order to ensure proper documentation of vehicle maintenance records.
- In order to reduce risk while driving, any Geo-Link vehicle will only be allowed to travel
   11 continuous hours followed by 10 hours of rest before traveling again.
- No personnel shall ride on a vehicle except within the passenger compartment.
- No hitchhikers are permitted in company vehicles.
- Sleeping in a vehicle with the motor running is prohibited unless a window is partially open and the parking brake is set.
- All vehicles must be inspected before driving. Inspection includes the engine compartment, in-cab checks, outside of the vehicle and air brake test if the vehicle is so equipped. The vehicle and all items inside (luggage and tools included) are subject to be searched. Refusal to cooperate with a search is grounds for dismissal.

- Vehicles shall not be refueled with the engine running.
- Vehicles equipped with catalytic converters present fire hazards due to potentially
  excessive temperatures of the converter. Care should be taken so that fires are not
  ignited because of parking in grassy or brushy areas.
- Vehicles should not be operated in four-wheel drive on dry pavement.
- Eye protection shall be worn when jump-starting vehicles. To jump-start a vehicle, remember that the battery of the disabled vehicle and the "good" battery must be of the same voltage and that the negative posts of both must be grounded. Check the fluid level in the dead battery, and be sure that it is not frozen. Take care that the vehicles are not touching and that in each vehicle the ignition is off, all accessories are off, the transmission is in "park" or "neutral," and the parking brake is set. Attach cable clamps in the order shown in the owners manual, and start the engine of the "good" vehicle. Start the engine of the disabled vehicle, and then remove the cables in exact opposite order.

#### **TRAILERS**

Geo-Link personnel may be required to pull logging trailers to and from field locations or between field locations. The following safety guidelines should be noted.

- The vehicle used to tow any Geo-Link trailer must be equipped with a properly mounted hitch of sufficient strength and correct size.
- All running, stop, and turn signal lights shall be inspected before traveling to ensure they are in good working condition.
- Vehicle mirrors shall be adjusted so that the driver can view the roadway beyond the trailer.
- A trailer shall never be pulled without a safety chain. Chains should be adjusted so they do not drag but should not be so tight that they bind on a full turn.
- Make allowances for increased stopping distances and longer turning radius.
- Be aware of the dangers of crosswinds on trailer stability.
- When parking the trailer another individual should be available to act as guide.
- Parked trailers shall be chocked.
- Trailer loads shall be properly secured regardless of how short the trip may be.
- Trailer tires should be frequently inspected for proper inflation and signs of wear.

#### MOTOR VEHICLE ACCIDENT REPORTING

If you are involved in an accident while operating a Geo-Link issued vehicle you must report and handle the incident according to the following guidelines:

- If you are involved in an accident STOP.
- Set out emergency reflectors/flares if available to protect yourself and your vehicle and warn other traffic in order to prevent any additional injury and/or damage.
- Get help for injured persons. Render first aid if you are qualified to do so.
- Ask a motorist or passerby to notify the police if you are unable to do so yourself.
- Give the other driver(s), your name, address, and operator's license number, and company's name, address and vehicle tag number.
- Obtain like information at the accident scene from the other driver(s) and any

witnesses.

- All Geo-Link issued vehicles are equipped with an envelope containing insurance information and an accident reporting form
- Follow local reporting requirements in reporting vehicle accidents.
- Discuss the specifics of the accident only with the police and Geo-Link management.
   Do not assume any blame or responsibility, do not express opinion, and do not become involved in arguments.
- Report any accident to the Geo-Link management as soon as possible by telephone, and follow instructions for filing a written report.

Please also be aware of substance/chemical releases, suspicious behavior, objects, or people, and report to your supervisor.

NOT REPORTING AN ACCIDENT WILL RESULT IN DISCIPLINARY ACTION AND CAN BE GROUNDS FOR TERMINATION

# SECTION IV PERSONAL SAFETY



#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is the responsibility of each employee to wear personal protective equipment as required by the nature of the job, the specific task being performed, the job site, and the potential hazards being encountered.

#### General

In accordance with 29 CFR 1910.132, Geo-Link shall provide hazard assessments for each job site or group of job sites for the purpose of determining what hazards are present or likely to be present that would necessitate the use of personal protective equipment (PPE). The PPE Hazards Assessment will be documented utilizing the form at the end of the safety manual.

Where administrative or engineering controls do not fully provide the necessary protection to employees, Geo-Link will utilize personal protective equipment (PPE) at no cost to the employee as its primary method of protecting employee health and safety. All PPE shall comply with the appropriate regulation governing its design and use.

Personal protective equipment, including PPE for eye, face, head, and extremities, protective clothing, respiratory protection, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition whenever it is necessary by reason of process hazards, environment, chemical or radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.

#### **Hazards Assessment Certification and Equipment Selection**

Geo-Link employees assigned to the project shall be responsible for developing and maintaining the PPE Hazard Assessment Certification for each site, group of sites, or project. The Safety Officer shall select appropriate PPE based upon the known or expected hazards likely to be present for each job, task, or duty, prohibit the use of damaged or defective equipment, and assure that each employee is properly trained in the use of assigned PPE.

The PPE Hazard Assessment Certification must be documented on the form at end of the safety manual and identify the work area being assessed, the date of the assessment, and the name(s) of the person(s) performing the assessment. Employees and supervisors will identify each activity or task, the potential hazards associated with that activity or task, the affected body part, and the required PPE.

#### Training

Prior to being issued any type of PPE employees shall be trained to know at least the following:

- 1) When PPE is necessary.
- 2) What PPE is necessary.
- 3) How to properly don, doff, adjust, and wear the PPE.
- 4) The proper care, maintenance, useful life and disposal of PPE.
- 5) The limitations of the PPE.

Employees shall demonstrate an understanding of the training and the ability to use the PPE prior to performing any actual work using the PPE.

Retraining of employees shall be required as follows:

- 1) When an employee who has already been trained demonstrates he/she does not have the understanding or the skill required to use the PPE.
- 2) Changes in the workplace render training obsolete.
- 3) Changes in PPE to be used render the training obsolete.

Geo-Link shall verify that each affected employee using PPE has received the required training through a written certification that contains the name of each employee, the date(s) of training, and the subject of the certification.

#### **HEAD PROTECTION**

- Hard hats meeting ANSI 289, (class A) standards are required.
- Hard hats should be clean and regularly inspected for visible cracks and defects. The hat suspension system must be maintained and replaced as needed.
- The hat should be worn squarely on the head and not cocked to one side or turned in a reverse position.
- Metal hard hats are prohibited because they are electrically conductive and do not offer as much impact resistance as an approved plastic safety hat.
- Always make the following checks of your hard hat
  - Look for an ANSI label or etching
  - Manufacturing date
  - o Compress and check for brittle plastic
  - Suspension for damage

#### **EYE AND FACE PROTECTION**

- In work site areas and job assignments where there are recognized eye or face
  hazards or there is a reasonable probability that eye or face injuries could occur,
  safety glasses with side shields meeting the ANSI 287.1 standard are required. When
  performing work where safety glasses do not offer adequate protection, other
  appropriate eye/face protection shall be worn.
- The use of contact lenses is strongly discouraged when working in areas of dust, chemicals, and spray operations where particles may enter the eyes. Contact lenses are prohibited with the use of self-contained breathing apparatus (SCBA) which might be required where hazardous atmospheres exist.
- All safety eyewear must have approved side shields designed for the frame being used
- When wearing a face shield, safety glasses or goggles must also be worn.
- When removing goggles, be aware of any dust or particles that may be resting on top
  of them that could fall into your eyes. Keep goggles clean.

#### **HEARING PROTECTION**

Hearing protection (ear plugs, ear muffs, or both) is required when working in all
posted high noise areas (85 dB and above) on the work site.

- Rule of thumb, if you cand understand spoken conversation from a distance of two feet or less, hearing protection required.
- Working in an area of high noise levels can cause both temporary and permanent hearing loss. Hearing loss can occur with no physical pain or other obvious warning.
- Be aware that unusual operating conditions such as blowing lines on an air-drilled well may cause temporary high noise levels which also necessitate hearing protection.

#### HAND PROTECTION

- Leather, leather-palmed, or cotton gloves shall be worn when handling materials that could cut the hands.
- Appropriate non-permeable gloves shall be worn when handling any chemicals or hazardous materials required for job completion.
- Geo-link requires you report and treat all cuts, scrapes, and punctures

#### **FOOT PROTECTION**

- Footwear suitable for working conditions on the work site shall be worn.
- Safety toe boots/shoes that comply with ANSI 241.1 shall be worn on the work site
  - At the time of initial hire Geo-Link will provide the new employee with a pair of steel /safety toe boots

#### RESPIRATORY PROTECTION

- Respirators are provided on site to protect against specific atmospheric contaminants
- Always check the MSD to be aware of potential respiratory issues before each job
- Always check to make sure the respirator is in good functioning condition, if you notice any problems please report to upper management.

#### **CLOTHING**

- Fitted Fire Retarded Clothing in good condition which covers the legs, body, and arms is the minimum requirement.
- Wearing any type of jewelry such as rings and bracelets can cause accidents when working near moving machinery and energized equipment and is prohibited on location during working hours.

#### PREVENTING BACK INJURIES

Back injuries, due mainly to improper lifting techniques, are common in the oil and gas industry. When lifting, follow these simple rules to avoid injuring your back.

- Get help to lift any load that is too heavy or too bulky for ease of handling.
- Bend your knees to pick up any object, no matter how light. Lift with your legs, not your back.

- Do not use your back as a "crane". Bending down from the hips to pick up an object means your back is being used as a crane. This can cause 10 times more strain than lifting with your legs.
- Be sure your footing is secure. Space your feet for good balance, preferably one alongside and the other behind the object to be lifted.
- Get a firm grip on the load with your entire hand, both palm and fingers, before the lift is attempted.
- Keep your back straight with head high and chin tucked in. This insures that the head, spine, back muscles, and internal organs are in correct alignment, thus minimizing the chance of pulled muscles or hernia.
- Take a deep breath prior to lifting. This helps support your spine.
- Draw the load in close to your body and tuck arms and elbows in towards your sides.
  This reduces fatigue in chest and arm muscles and is the position where the most
  power can be generated for lifting. This position also helps control the body's center
  of gravity.
- Keep your body weight (center of gravity) directly over your feet. Lift smoothly. Do not jerk up or back or rotate quickly.
- To raise an object above shoulder height, first lift to waist level.
- To change direction, turn your entire body, including the feet. DO NOT twist your body at the waist while lifting.
- Do not carry an object that is too big to see around or over.
- Take advantage of skids, bars, jacks, blocking, or rollers whenever possible when a very heavy object must be moved.

Not all back injuries are the result of lifting. Slips, trips, and falls can also be major causes of injuries. Employees are cautioned to be aware of these possibilities at all times at the work site.

# SECTION V WORK SITE SAFETY



#### **MSD**

Material Safety Data (MSD) is a written hazard identification and assessment program. Each employee is required to review the MSD handbook before starting work on any new job. Approved Geo-Link materials are provided at the end of this manual. Any chemical not listed is not permitted to be used on any jobsite. If an employee would like to use a chemical not listed on the provided list, Geo-Link requires you notify upper management for approval of use.

#### OBSERVATION PROGRAM

Geo-Link utilizes an employee observation program consisting of each employee being evaluated once over the course of a given year. Employees may be observed at any time. The training for this process includes how to conduct an observation, how to complete observation forms, what behaviors mean, and feedback training and role play. Upon completion of observation, the observer will have a discussion with the observed to get feedback. A written record of these evaluations will be kept on file at Geo-Link headquarters. This data will be used to compare measurements and track results so that numerical and statistical comparisons can be made over time. Once trend analysis is complete, appropriate action plans must be developed to address unsafe behaviors.

#### HOUSEKEEPING

Good housekeeping is one of the most important requirements for a safe and healthy work environment. Poor housekeeping creates an unsafe condition and indicates a lack of pride in job performance. Maintaining good housekeeping can only be accomplished if you make the effort to keep your job area clean and in proper order. Good housekeeping is definitely your responsibility not only in the logging unit but also in your designated area on the job site. Proper housekeeping will eliminate a number of serious hazards and will help your job run smoothly. The following guidelines are integral to good housekeeping.

- Lines (power water gas trap) from the logging unit shall be run in such a way that tripping hazards will be minimized for all personnel on the job site.
- Logging unit stairs shall be kept clean and free of all obstacles or slippery material.
- Areas around the logging unit itself, fuse boxes, fire extinguishers, and other safety appliances shall be kept clear to
  ensure safe access in case of an emergency.
- Materials shall be stored in designated areas and in an orderly fashion.
- Drips and spills shall be cleaned up immediately.
- Tools and all other equipment shall be kept in their proper places when not in use.
- Indoor work areas and aisles shall be kept free of obstructions.
- Use of extension cords should be minimized, and if used, they should be arranged to avoid tripping hazards and electrical overload.
- Do not pull on an electrical cord to shut power off to any equipment.
- Disconnect (unplug) the power source before trying to remove jammed materials from a machine (e.g. rotolite or computer printer).
- Keep food, drink, and excessive combustible materials away from electrical equipment and computers. Damage to circuitry or destructive fires may result.
- All trash and waste shall be bagged and removed to an appropriate disposal area (e.g. a metal trash cage or dumpster) in a timely manner.

#### **WARNING SIGNS/TAGS**



Sign	Use	Color Scheme	Examples
Danger	Immediate Hazards	Red and black on white	DANGER
Caution/Warning	Potential Hazards	Black on yellow Black on orange	CAUTION
Safety	Safety Instructions	Green on white	SAFETY

#### **ELECTRICAL SAFETY**

Most oilfield equipment operates on 220 volts or higher. For normal Geo-Link field operations, a 110/120 volt outlet must be located and the appropriate plug applied to the logging unit's power supply cord. Consult the tool pusher and/or client's representative for assistance if necessary. Logging units may be operated on 220 volt power if certain modifications are made at the unit's power supply panel. Consult Geo-Link upper management for instruction in the proper procedures required. Once the logging unit has power, unit rig-up can proceed as per the Geo-Link Mud Logging and Well Site Geology Training Manual. Use caution around any electrical equipment, especially in adverse weather. The following safety precautions should be followed whenever you work on, with, or around electrical equipment.

- Inspect all power supply cords and cords of portable electric tools before placing them
  in service. Tools and lines showing worn, cracked, deteriorated, or inadequate
  insulation or plugs shall be removed from service and repaired or replaced. Geo-Link
  requires that any splicing of electrical wires be performed by a certified and trained
  electrician and conformed to OSHA standards.
- De-energize any electrical equipment before beginning work.
- Use proper personal protective equipment. Use proper procedures, tools, and equipment. Document changes or modifications to any equipment.
- Do not wear rings, watches, or similar metallic objects while working on or around

- energized equipment.
- Blown fuses shall be replaced only with the proper type and rating.
- Do not allow electrical shock hazards to be exposed.
- Maintain all electrical equipment in the condition required to meet its classified location and use.
- All electrical equipment shall be properly grounded.

While on location all Geo-Link employees are subject to and responsible for familiarizing themselves with and adhering to the lockout/tagout policies of the client for which we are working.

#### HAND TOOLS

Operation of a field unit for mud logging and/or wellsite geology calls for the use of hand tools during rig-up and rig-down procedures and for equipment maintenance. These tools must be properly used and maintained in order to prevent the risk of an accident.

Most injuries involving hand tools are caused by misuse of the tool or use of a defective tool. Disabling accidents from the use of hand tools include the loss of eyes and vision, puncture wounds, severed fingers, tendons, arteries, broken bones, and contusions. In many cases the employee is aware that he/she is either misusing a tool or using a tool in poor condition.

The following are three general guidelines to follow when using hand tools.

#### 1 Select the proper tool for the job.

Using an inadequate tool could result in an accident as well as property damage. Examples of the use of improper tools include using pliers instead of a wrench, using a wrench instead of a hammer, and using a putty knife tip instead of a screwdriver. Using the right tool for the job will help you avoid finding yourself in a vulnerable situation.

#### 2 Use tools in a correct manner.

This includes not pulling a wrench toward your chin while tightening a nut or bolt, not using a screwdriver on an object held in the hand. Use common sense at all times!

#### 3 Maintain tools in good operating condition.

A hand tool that is not in good operating condition cannot perform the job in a safe manner. Wrenches with worn jaws, hammers with loose heads, and screwdrivers with broken points are examples of unsafe tools that could easily lead to an accident. Inspect all tools before each use. All defective tools should be taken out of service and reported to the Geo-Link upper management. If a replacement tool is not readily available, seek permission from the appropriate authority (tool pusher, driller, etc.) to borrow a tool temporarily in order to complete the job or procedure at hand.

## 4 KNIVES, BOX CUTTERS, CARPET KNIVES, LEATHERMAN AND EXACTO KNIVES

## AS OF 3/23/06 THE USE OF ANY TYPE OF KNIFE BY ANY GEO-LINK EMPLOYEE OR SUB CONTRACTOR TO DO ANY WORK RELATED TASK IS PROHIBITED.

#### **ELEVATED WORK**

Geo-Link does not provide safety harness training. Employees are not expected to work above 6ft off the ground at any time. In case you need to access heights above 6ft, we ask that you contact the rig crew to compete the task.

#### COMPRESSED GAS CYLINDERS

Field calibration of some Geo-Link gas detection equipment requires the use of small pressurized bottles of test gas of known hydrocarbon composition. Furthermore, cylinders of oxygen  $(0_2)$ , nitrogen  $(N_2)$ , carbon dioxide  $(C0_2)$ , and acetylene  $(C_2H_2)$  might be in use at the job site. Therefore, Geo-Link personnel should be thoroughly familiar with safe handling techniques and be aware of potential hazards.

#### HANDLING CYLINDERS

- Do not move or store cylinders without properly installing the protective cap over the valve.
- Cylinders are smooth, heavy, and difficult to hand carry. When they must be moved without a cart, use a carrier or get help. Safety glasses should be worn whenever moving cylinders.
- Cylinders should not be allowed to strike each other.
- Cylinders should not be used for rollers, supports, or any purpose other than to contain gas.
- Transport all cylinders according to the appropriate regulatory requirements.

#### **USING CYLINDERS**

- Keep cylinders in an upright position, secure to walls or bench top with chain, bracket, or rope to prevent falling. An elbow or foot can topple a tall cylinder, dislodging or breaking connected regulators and piping and injuring feet. If a cylinder is damaged so that its valve shears, it can become a projectile traveling at deadly speed known to penetrate masonry walls!
- Before using any gas for the first time, familiarize yourself with the information in the Material Safety Data (MSD) for that substance.
- Before any connections are made, inspect the cylinder carefully. If there is any hissing or other sign of escaping gas, follow the procedures outlined on the MSD, and advise the client's representative and/or tool pusher of any potential hazard. Also, inspect valves for damaged threads. Clean away any oil, grease, and dirt unless the cylinder contains oxygen or other strong oxidant. In that case, do not clean the valve. Traces of organic matter left in an oxygen valve can cause explosions when the cylinder is opened. Return any defective cylinders to the Geo-link's yard or supplier as soon as

- possible.
- Threads on a regulator or fitting must correspond to those on the cylinder valve outlet.
   Do not force or modify connections. Beware of cross-threading.
- Never use a cylinder of compressed gas without a pressure-reducing regulator connected to the cylinder valve, except where the total system is specifically designed to handle maximum cylinder pressure. While any given regulator may mate with cylinders of different gases, it is strongly recommended that equipment be dedicated to a single type of gas.
- Use regulators and pressure gauges only with gases and pressure ratings for which they are designed and intended.
- Never stand in front of a cylinder regulator when pressure is first applied.
- Always close the cylinder valve before attempting to stop leaks between the cylinder and the regulator. Never tighten a leaking connection under pressure.
- In field use place a protective hood over the pressure regulator and cylinder top to minimize exposure to the elements and dust.
- Never permit sparks, molten metal, electric currents, excessive heat, or flames to contact the cylinder or attachments.

#### STORING CYLINDERS

- Store cylinders upright in a safe, dry, cool, well-ventilated area that limits corrosion damage and deterioration. Do not expose cylinders to temperatures greater than 125°F.
- Hvdrotest should be current. Out-of-date cylinders must be retested or replaced.
- Store empty and full cylinders separately, with empty cylinders capped and plainly identified as empty.

#### CHEMICAL AND HAZARDOUS MATERIALS

#### **GENERAL PRECAUTIONS**

- Do not eat, drink, smoke, chew gum, or apply cosmetics in areas where chemical or hazardous materials are present.
- Wash hands before conducting these activities outside the work area.
- Do not smell or taste chemicals.
- Confine long hair and loose clothing.
- Be sure that Material Safety Data (MSD) sheets are readily available for all chemicals being used on a specific job site.
- Before beginning a new procedure, review MSD, and plan appropriate protective procedures.
- Handle and store laboratory workplace glassware with care to avoid damage. Take damaged glassware out of service, and replace as soon as possible.
- Use equipment only for its designated purpose.

#### PERSONAL PROTECTIVE EQUIPMENT

- Appropriate eye protection should be worn by all personnel, including visitors, where chemicals are stored or handled.
- Wear appropriate gloves whenever the potential for contact with hazardous materials exists. Inspect the gloves before each use, and replace as necessary.
- Wear appropriate shoes at all times when working with chemicals.

#### **WASTE DISPOSAL**

- Promptly clean up spills using appropriate protective apparel and equipment as outlined in the MSD. Dispose of properly.
- All chemical containers shall be disposed of in accordance with state, federal, and local requirements.
- Do not discharge chemicals into drains unless neutralized or rendered harmless.
- Geo-link requires that materials should be used in a manner that minimizes the amount of waste generated

#### **TRANSPORTATION**

Any employee transporting chemical and/or hazardous materials is required to read and possess a copy of the MSD of each chemical in transit. Employees must complete Geo-Link training on procedures and practices required in transportation.

#### **HYDROGEN SULFIDE (H<sub>2</sub>S)**

Hydrogen sulfide gas,  $H_2S$ , occurs in a variety of natural and industrial settings. It is generated as an unwanted byproduct in many industrial operations. It is also produced by bacterial action and decomposition of sulfur-containing organic matter. It is commonly present in produced liquids, both water and oil, and gases throughout many oil and gas fields of the world. Regardless of the origin,  $H_2S$  is very dangerous due to its explosive nature and toxicity. The principal concern from inhalation of  $H_2S$  is its acute toxicity.  $H_2S$  causes paralysis of the respiratory center in the brain and can result in immediate collapse and death. The following paragraphs summarize the physical characteristics of  $H_2S$ , the toxicity of the gas, and safety precautions to follow when working on a well where  $H_2S$  production is possible.

#### PHYSICAL CHARACTERISTICS

Hydrogen sulfide,  $H_2S$ , is also known as "sour gas,+"rotten egg gas,+and "sulfurated hydrogen.+ It is a highly toxic, colorless, flammable, and corrosive gas with a characteristic foul odor similar to rotten eggs. This offensive odor cannot always be taken as a warning to the presence of  $H_2S$  because the ability to sense this odor disappears within 3 to 15 minutes when breathing concentrations as low as 100 parts per million (ppm).

 $H_2S$  is heavier than air. Its vapor density equals 1.189 (air =  $\sim$  .00 at  $60^{\circ}F$ .). When released,  $H_2S$  can travel some distance along the ground and may accumulate in low-lying areas and in cellars, ditches, drain systems, tanks, sumps, and pits. Fortunately,  $H_2S$  can be readily dispersed by air currents.

 $H_2S$  is highly flammable. It will form an explosive mixture with air in concentrations between 4.3% and 46% by volume. The auto-ignition temperature of  $H_2S$  is  $500^{\circ}F$ .  $H_2S$  burns with a blue flame and produces sulfur dioxide ( $SO_2$ ), another highly toxic gas. This colorless gas has a characteristic pungent odor. It is *not* combustible and is also heavier than air.  $SO_2$  is a severe irritant of the eyes, mucous membranes, and skin. If anyone is exposed to high concentrations of  $SO_2$ , move them to fresh air at once, and, if breathing has stopped, provide artificial respiration.

H<sub>2</sub>S is highly soluble in water and liquid hydrocarbons at elevated pressures such as those found deep in a wellbore, and will come out of solution as a gas at surface (ambient) conditions.

H<sub>2</sub>S is extremely corrosive to metals and can also lead to hydrogen embrittlement and sulfide stress cracking.

#### **TOXICITY**

 $H_2S$  is an irritant gas as well as a toxic gas. At low concentrations (10 ppm), the eyes may become irritated. In concentrations of 50-500 ppm,  $H_2S$  acts primarily as a respiratory irritant. In these lower levels of exposure, the following symptoms may appear alone or in combination: eye irritation, skin irritation, dryness of the nose and throat, coughing, fatigue, nausea, headache, loss of appetite, dizziness, irrational behavior. In high concentrations (500-1000 ppm),  $H_2S$  acts as a systemic poison causing unconsciousness and death through respiratory failure. Breathing stops and death will follow in 4 to 6 minutes from asphyxiation unless the victim is moved to fresh air at once and given mouth-to-mouth resuscitation. The table which follows shows the effects of increasing concentrations of  $H_2S$  on the human body.

#### **TOXICITY TABLE**

CONCENTRATION		PHYSICAL EFFECTS
PPM *	Percent (%)	
0.003-0.2	0.0000003-0.000002	Odor threshold
10	0.001	Obvious and unpleasant odor, beginning eye irritation.
		Maximum allowable concentration for 8
		hours.

## RESPIRATORY PROTECTION IS REQUIRED WHENEVER ATMOSPHERIC CONCENTRATIONS EXCEED 10 PPM!

100	0.01	Kills sense of smell in 3-15 minutes.  May also burn eyes in 15-30 minutes and sting and burn throat after 60 minute exposure.
200	0 .02	Kills sense of smell rapidly. Stings and burns eyes and throat.
300	0.03	Considered immediately dangerous to life and health (IDLH as established by the American Conference of Governmental Industrial Hygienists).
500	0.05	Loss of reasoning and balance, dizziness breathing ceases in 2-15 minutes. Prompt artificial respiration needed.
700	0.07	Rapid loss of consciousness. Breathing will stop and death will result if not rescued promptly and immediate artificial resuscitation commenced.
1000	0.10	Immediate unconsciousness and death within minutes. Permanent brain damage may result unless rescued promptly and immediate artificial resuscitation commenced.

<sup>\*</sup> Parts Per Million

#### **SAFETY PRECAUTIONS**

All Geo-Link personnel engaged in company business on drilling operations where the presence of H<sub>2</sub>S is anticipated shall be trained in H<sub>2</sub>S safety and, if required, shall be certified. Geo-Link can provide equipment which will detect and measure H<sub>2</sub>S in mud gas or in the blooie line. **However, overall jobsite monitoring for H<sub>2</sub>S is the client's responsibility.** Personal and/or stationary detectors, rescue equipment, and self-containing breathing apparatus will be provided at the client's discretion and expense.

Geo-Link personnel should be very cautious when working in low-lying areas or any jobsite area where there is not adequate ventilation. Remember, the sense of smell is not a reliable indicator for detection of hazardous concentrations of  $H_2S$ .

Observe wind direction (wind sock, flagging, etc.) on location and know in which direction to move if  $H_2S$  is detected.

The "buddy system" will always be used when entering an area suspected of containing hazardous concentrations of H<sub>2</sub>S.

Never attempt to rescue an H<sub>2</sub>S victim without proper training and respiratory protection in the form of self-contained breathing apparatus (SCBA) or approved hose line unit.

#### **ENVIRONMENTAL PROTECTION**

All Geo-Link personnel shall follow all rules and environmental laws for pollution prevention, control, and disposal while engaged in company business. All Geo-Link laboratory and field personnel should be familiar with the spill and disposal data on the Material Safety Data for substances commonly used in normal analytical and logging operations.

You should report **any** leaking oil, gas or other potentially hazardous substance to the client's representative and/or tool pusher on the job site. Do **not** assume that someone else will do it first. Early detection of spills and leaks can greatly decrease environmental hazards and facilitate proper clean-up. Environmental protection is **everyone's** responsibility.

#### PHYSICAL HAZARDS

Inhalant hazards are to be handled properly. Geo-Link requires you do not drill, cut, mine, tear, remove, or disturb a material that you suspect contains asbestos. Geo-Link requires you to take extreme precaution when the weather becomes adverse, including events such as lightning, snow and ice, windstorms, flooding, ultraviolet radiation, and extreme temperatures.

#### **BIOLOGICAL HAZARDS**

Do not approach wildlife, and be aware of site specific biological hazards when working outdoors. Take extra caution to protect yourself from Biological Agents. Store food and drink in a way that

will prevent contaminations from chemicals, oils, dirt, biological agents, or other substances. Whenever possible, eat food away from the workspace. Practice good personal hygiene. Avoid contact with potentially contaminated animals. Practice dust and aerosol prevention measures. Use proper PPE. Only bottled water should be consumed on the job site.

## SECTION VI FIRE PREVENTION & PROTECTION



#### FIRE PREVENTION

Prevention is the best method of avoiding a fire and its potentially tragic consequences. All Geo-Link personnel must make a conscientious effort daily to practice fire prevention. To do this, it is important to know the principal causes of fires and ways to minimize them. The major causes of fires include electrical overloads or malfunctions, mental errors, poor housekeeping, smoking, and poor equipment maintenance. Most of these causes can be eliminated by using common sense, following proper work procedures, and maintaining good housekeeping.

You should observe the following precautions at all times in order to minimize any fire hazard.

- Obey posted "No Smoking" signs.
- Know your work area. Keep it clean. Know what materials around you could ignite
  accidentally. Wear proper clothing, and keep it clean. Handle and store flammable
  materials with extreme care.
- Do not leave oily rags, waste, or clothing lying around since a fire may result from spontaneous combustion. Dispose of such materials in a safe and environmentally sound manner.
- Keep all solvents and other flammable liquids in approved properly labeled containers.
   Containers shall be properly secured when transported.
- Do not use flammable liquids such as gasoline or chlorothene for cleaning purposes. This applies to *any* liquid with a flash point normally below ambient temperatures.
- Keep all containers or flammable liquids tightly closed and away from stoves, furnaces, or other potential ignition sources.
- Maintain good ventilation in all buildings and trailers where propane (or other compressed gas) is used for heating.
- Follow proper procedures when lighting furnaces, hot water heaters, and ranges, and keep covers in place.
- Use soap suds when testing for leaks on gas connections. Never use an open flame.
- Mops, rags, and other combustible materials should not be placed for drying or storing near engine exhaust or other sources of ignition.
- Regularly and thoroughly check equipment for mechanical sparking, heat build-up due to friction, and sparking or hot spots from electrical shorts in wiring, switches, motors, etc.
- Use caution when jumping car batteries, as explosions have occurred from sparks generated during attachment or removal of jumper cables.
- Vehicles can be an ignition source for flammable and combustible materials. Catalytic converters can ignite grass, paper, and other materials. A vehicle's ignition system can ignite gasoline vapors.
- Friction from a flat tire or sticking brake can generate enough heat to catch a trailer on fire. When towing trailers, check tires frequently for potential problems.

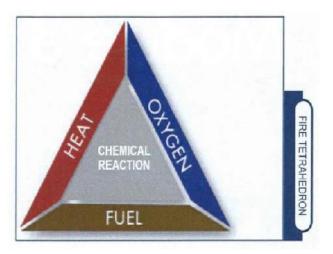
#### FIRE PROTECTION

#### INTRODUCTION

In the oilfield, fire is one of the worst things that can occur. The results can be deadly to personnel, and property damage can be substantial with great monetary loss. *Everyone* on a

drilling location must work to prevent fires by utilizing safe work practices. While Geo-Link personnel are only directly responsible for themselves and Geo-Link equipment, emergency conditions may require your assistance in fire-fighting. Therefore, all Geo-Link personnel should be familiar with the firefighting equipment including the different classes of fire extinguishers available at the job site and recognize the type of fire for which each is designed. Geo-Link personnel will be trained in general principles of fire extinguisher use and hazards of incipient stage firefighting during pre-employment training and annually thereafter.

Fire is a rapid chemical reaction. Fire burns because four elements are present: **fuel** (crude oil, natural gas, paper, wood, etc.), **oxygen** (air), **heat** (static electricity friction, hot surfaces, sparks from welding or electrical equipment, flames, etc.), and **chain reaction** (involving the fuel and oxygen). Remove any one of these (fuel. oxygen, or heat), or stop the chain reaction, and the fire will go out. All four components are necessary to make a fire. If the chain reaction is sufficiently fast an explosion can result.



#### **CLASSIFICATION**

The National Fire Protection Association classifies four categories of fires. It is important that you be able to identify the type of fire to be fought so that proper firefighting equipment can be used.

#### **CLASS A FIRES**

These are fires in ordinary combustible materials such as wood, paper, textiles, packing materials, and rubbish. The cooling or quenching effects of water are effective in extinguishing these fires. Class A fires are also extinguished by multipurpose chemicals which provide rapid knock-down of the flame and form a fire-retarding coating which prevents reflash.

#### **CLASS B FIRES**

Flammable liquids and gases such as oil, grease, gasoline, paint, or propane are the sources of Class B fires. These fires can occur in the vapor-air mixture over the surface of the flammable and combustible liquids. A smothering or combustion inhibiting effect is necessary to extinguish this type of fire. Dry chemicals, foam, Halon (bromotrifluoromethane), carbon

dioxide, and water fog can all be used as extinguishing agents.

#### **CLASS C FIRES**

These fires occur in electrical equipment (motors, generators, switch panels, fuse boxes and computers) where a non-conducting extinguishing agent must be used. Dry chemicals, Halon and carbon dioxide are suitable. However, carbon dioxide and Halon are not recommended for use outdoors because they are readily dispersed by wind. When you fight any electrical fire, disconnect the power sources first. Foam and water conduct electricity and could cause personal injury or could short-circuit the equipment and therefore should not be used.

#### **CLASS D FIRES**

Class D fires involve combustible metals such as magnesium, zirconium and sodium. Special techniques, extinguishing agents (such as dry powder), and equipment are required. It is highly unlikely that you will encounter a Class D fire while engaged in Geo-link business on a drilling location.

Class	Contents	
А	Water	
AB	Chemical Foam or Gel	
BC	Carbon Dioxide	
BC	Dry Chemical	
BC	Liquefied Gas	
ABC	Dry Chemical or Halon Substitute	
К	Sodium or Potassium Bicarbonate	

#### FIRE EXTINGUISHERS

Fire extinguishers are an important part of any fire protection program. For fire extinguishers to be successful the following conditions must be met:

- 1. The fire must be discovered while it is still small enough for the extinguisher to be effective.
- 2. The extinguisher must be easily accessible and in proper working condition.
- 3. The extinguisher must be the proper kind to extinguish the fire.

Geo-Link field units are equipped with a minimum of one 2 1/2 lb. multipurpose dry chemical (A10BC) fire extinguisher. These are prominently mounted on an easily accessible area of a wall in the work area of the trailer. In the field, it is the responsibility of the Unit Supervisor (lead

person) to perform a visual check at least monthly to give reasonable assurance that the extinguisher is fully charged and operable. This inspection guarantees that the extinguisher:

- 1. Is in its designated place.
- 2. Has not been activated.
- 3. Has not been tampered with.
- 4. Has no obvious physical damage.
- 5. Has no external corrosion.
- 6. Has no impairments and is properly tagged.

Thorough maintenance is performed yearly or whenever indicated by an inspection. This includes a thorough examination and any necessary repair, recharging, or replacement.

The hand-portable, cartridge-type, dry chemical extinguisher is the most commonly used fire extinguisher, and several are usually found on a drilling location. These and those provided by Geo-Link should be used as follows:

- 1. Take the extinguisher off its hanger and walk a safe distance upwind from the fire.
- 2. Follow the instructions on the cartridge to pressure the extinguisher. Keep clear of the extinguisher by standing to one side.
- 3. Lift the extinguisher by the carrying handle and approach the fire with the wind at your back.
- 4. Squeeze the nozzle valve completely open when you are within 6 to 8 feet of the fire. Direct the stream of dry chemical 6 inches ahead of the flame edge, using a side-to-side motion. Make each sweep of the stream slightly wider than the near edge of the fire. Do **not** raise the nozzle to chase the fire ball.
- 5. Note that discharge time for any portable extinguisher (30 lbs. or less capacity) is only 30 seconds or less. If your extinguisher begins to run out of chemicals, back away from the fire
- 6. Always back away from an extinguished fire. Never turn your back because the fire could flash back.
- 7. After using the extinguisher, turn it upside down and squeeze the nozzle to release all the pressure.
- 8. Follow manufacturer's instructions for refilling and maintaining extinguishers as soon as possible.

When using a fire extinguisher, always remember the phrase **PASS**: Pull the pin, **A**im the nozzle, **S**queeze, **S**weep the base of the fire.

#### **RESPONSE PROCEDURES**

In case of fire in a Geo-Link field unit, vehicle, or anywhere on a drilling location you should use the following procedure:

- 1. **Summon help.** Do not attempt to fight a fire without alerting someone else.
- 2. Analyze the situation considering:
  - Threat to life?
  - Damage to property?
  - Evacuate, or is extinguishing the fire possible?
  - Notification and assistance from outside authorities appropriate?
  - Hazardous or toxic chemicals present?

- 3. Isolate all fuel sources and/or threatened facilities.
- 4. Fighting a fire in the initial stages is considered incipient fire fighting. Do not attempt to fight fires beyond the incipient stage unless you have been trained on location as part of an emergency response team.
- 5. Locate the firefighting equipment and approach the *fire from the up wind side*. In the case of a gas fire, do not attempt to extinguish the fire unless the *source of the fuel feeding the fire can be shut off*. Until the sources can be shut off, a cooling water spray should be applied to any equipment affected by flames.
- 6. After the fire is extinguished, stand by to ensure there are no flashbacks.
- 7. Assess the damage to Geo-Link equipment and any injuries to Geo-Link personnel, and fill out the necessary reports.

## **SECTION VII**

## **HAZARD COMMUNICATION PROGRAM**



#### HAZARD COMMUNICATION PROGRAM

#### INTRODUCTION

Geo-Link is committed to compliance with Occupational Safety and Health Administration (OSHA) standards for the workplace. At the time of hiring, all Geo-Link personnel are provided with information and training on chemical hazards and other hazardous substances to which they may be exposed in the course of normal field operations. This training is updated whenever a new hazard is introduced.

#### **TRAINING**

Chemicals in the workplace may be hazardous to personnel in many different ways including flammability, reactivity, and toxicity. During the initial training and orientation period Geo-Link personnel are informed of the OSHA requirements regarding hazard communication and the possible operations they may be asked to perform that require the use of hazardous substances. They are shown the location of the OSHA-required list of hazardous chemicals for each field unit and its accompanying Material Safety Data (MSD). They are required to familiarize themselves with the information provided in the MSD for substances with which they will be working or may work. During this time, they are also taught what precautions to take to reduce exposure and the use of proper protective equipment.

Fortunately, the hazardous substance risks in Geo-Link field operations are minimal. The potential for exposure through any route of entry (inhalation, ingestion, skin contact, or adsorption, etc.) is very slight if proper work procedures and appropriate personal protective equipment are used. The potential for risk due to the highly flammable nature of compressed gases which may be in use in the field (routinely propane and hydrogen) is also very slight if the gas bottles and cylinders are handled properly. *Appropriate work practices are the fundamental safeguard against chemical hazards in all Geo-Link field operations.* 

## **SECTION VIII**

## **TERRORISM AWARENESS PROGRAM**



#### TERRORISM RESPONSE AWARENESS PROGRAM

Geo-Link takes terrorism very seriously on our worksites. An easy strategy to remember the different types of terrorism attacks is the acronym B-NICE:

Biological (release of bacteria, viruses or other agents causing illness or death)

**N**uclear (Use or threatened use of a nuclear bomb or detonation or threated detonation of a conventional explosive incorporating nuclear materials)

Incendiary (consists of: An igniter or fuse, a container or body, an incendiary material or fiber)

Chemical (5 types: Nerve Agents, blister agents, blood agents, choking agents, irritating agents)

Explosive (Two types: substance or article, including a device, designed to function by explosion and substance or article, including a device, that by chemical reaction within itself, can function in a similar way even if not designed to function by explosion, unless the substance or article is otherwise classified)

All Geo-Link employees are advised to immediately report any suspicious behavior to your supervisor. Always carry your photo ID when on a worksite. In the event you are transporting materials/equipment make sure that all locks are intact and observe/report any unknown or suspicious personnel loitering near equipment. Containers to/from our facilities must be properly secured, locked, and labeled. In cooperation with the national terrorism response program all Geo-Link employees give permission to be searched at any time on any job site.

# SECTION IX EMERGENCY PROCEDURES



#### INTRODUCTION

On most drilling locations, emergency procedures should be available for various emergency situations that could occur. Typically plans for fire/explosion, oil spills, toxic or combustible gas release, injuries, and medical evacuation will be posted in the dog house or elsewhere on location. In certain areas, plans for lightning strikes and earthquakes might be included. Geo-Link personnel should familiarize themselves with these plans and ascertain what role they should take in implementing them. For Geo-Link field operations specifically, there are only three major concerns: injuries, release of combustible gas, and fires. Fire prevention and fire response are covered in Section VI of this manual. If an injury occurs, in the absence of medical assistance that is reasonably accessible in terms of time and distance, a person who has a valid certificate in first aid will be available to render first aid. All Geo-Link employees will be trained in and receive a valid certificate for first aid training from the U.S Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence. Geo-Link employees are required to participate in drilling rig emergency response drills.

#### INJURIES AND INJURY REPORTING

In the event of injuries, use the following procedure:

- Notify back-up personnel in the event that a rescue must be made.
- Remove the injured to a safe area if leaving them where they are might further endanger them. If possible, phone or radio for medical assistance in the event of serious injury.
- Provide first aid for the injured to the extent that you are trained or qualified.
- Await medical personnel, or transport the injured to a medical facility in the case of serious injuries.
- If any Geo-Link personnel are injured, notify the Geo-Link upper management as soon as possible. Otherwise notify the client's onsite representative and/or tool pusher. If you can safely return to work, do so. Otherwise notify the Geo-Link upper management and client's representative that you cannot, and await further orders.
- Once the client's onsite representative and/or tool pusher have been notified do not further discuss the incident with anyone other than Geo-Link upper management.
- In order to investigate an injury fully, Geo-Link asks you to track each injury through use of proper accident reporting forms. In investigating any accidents, incidents, or near misses, Geo-Link will search for the main cause through use of the root cause process.

#### SAFETY STAND-DOWN POLICY

In the event of any OSHA recordable incident or accident occurring in the field at a given location, Geo-Link employees at the given location will undergo an immediate safety stand-down. The safety stand-down period will be used to review the incident or accident with Geo-Link upper management, to identify root causes of the incident or accident, and to determine and implement policies and procedures that will prevent the incident or accident from recurring in the future.

Employees at the given location will not be returned to duty until such time as Geo-Link upper management sees fit. Failure to comply with this policy will result in immediate termination.

#### FIRST AID/BLOODBORNE PATHOGENS

First aid is the treatment given for minor injury or illness to prevent it from becoming a serious impairment and also the immediate temporary treatment given before the services of qualified medical personnel can be obtained.

A first aid kit is provided in each Geo-Link field unit consisting of items determined to be adequate for the environment in which they will be used. The Unit Supervisor is responsible for checking its inventory at the completion of a job and reporting to the Geo-Link upper management what replacement items are required.

Instruction in basic first aid (e.g. treatment of shock, burns, and cuts) is included in the training of new hires and will be conducted thereafter to maintain certification.

On site, employees will be instructed in the location and procedures for use of eye wash stations around the rig in the event of exposure to any corrosive materials.

Infected individuals may not show signs of an exposure. Workers should use the universal precaution and assume that all blood or body fluids are potentially infectious. Use barrier protections as an appropriate PPE. Wash hands and other skin surfaces immediately if in contact with blood or infectious materials. Wash hands and other skin surfaces immediately after removing gloves or other PPE. Handwashing facilities are located at all work locations, and antiseptic solutions/towelettes are available for use. Avoid accidental injuries when handling potentially contaminated items. Avoid touching biohazards or contents of red plastic bags. All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other infectious materials. Instruction in dealing with bloodborne pathogens is conducted during new hire training and thereafter on a yearly basis. An exposure control plan is kept at Geo-Link headquarters, is reviewed with employees during training, and is available to employees at any time. In addition, if an event occurs exposing employees to bloodborne pathogens, records of the exposure will be kept for the duration of the involved employeesq employment plus a duration of thirty years. Hepatitis B vaccine will be provided to all employees with occupational exposure at no cost.

## SECTION X SAFETY MANUAL CONFIRMATION



To: Employees and	<b>I</b> Contractor	<b>Employees of</b>	Geo-Link
-------------------	---------------------	---------------------	----------

Employee's Signature

<b>After you</b> have read this manual, you should discuss any items that you do not understand with the Geo-Link Safety Officer or other member of the management team. Then sign this receipt and return it to the Geo-Link office staff for inclusion in your personnel record.
Failure to follow the guidelines found in this handbook may be grounds for disciplinary action up to and including termination.
I have received and read the handbook "Geo-Link Safety Manual", 2014 Edition. I have had all questions answered to my satisfaction. I agree to abide by these guidelines to the best of my ability during my employment with Geo-Link. I plan to make safety my highest priority.

Date

## SECTION XI PROGRAM CONFIRMATIONS



I have been advised of the different types of trainings/programs that employment with Geo-Link will require me to use, and I have been instructed in their use by a Geo-Link supervisor.

Behavior Based Program:		
Employee Initials	Date	
Alcohol and Drug Program:		
Employee Initials	Date	
Workplace Violence Program:		
Employee Initials	Date	
Transportation Program:		
Employee Initials	Date	
Personal Safety Programs:		
Employee Initials	Date	
Preventing Back Injuries:		
Employee Initials	Date	
Work Site Safety Program:		
Employee Initials	Date	
Fire Protection and Prevention Program	:	
Employee Initials	Date	
Hazard Communication Program:		
Employee Initials	Date	

Terrorism Response Awareness P	rogram:	
Employee Initials	Date	
Emergency Procedures Program:		
Employee Initials	Date	
Personal Protection Equipment Pro	ogram:	
Employee Initials	Date	
Hazards Assessment Certification	and Equipment Selection	
Instructing Supervisor	Date	_

## SECTION XII

## **FORMS**



#### **AUTOMOBILE ACCIDENT INFORMATION**

1. ONLY GIVE: YOUR NAME, DRIVERS LICENSE #, COMPANY NAME, COMPANY ADDRESS, AND VEHICLE LICENSE # TO OTHER DRIVER(S) INVOLVED IN THIS ACCIDENT. DISCUSS THE SPECIFICS OF THIS ACCIDENT ONLY WITH LAW OFFICIALS.

2.	OTHER DRIVERS NAME:
	ANY WITNESS NAME:
	OTHER DRIVERS ADDRESS:
	ANY WITNESS ADDRESS:
	OTHER DRIVERS LICENSE #:
	OTHER DRIVERS INSURANCE INFO:
	OTHER DRIVERS VEHICLE LICENSE #:
	ANY STATEMENT FROM WITNESSES:

3. REPORT ALL ACCIDENTS TO ROB ADAMS AT 406-446-3654 ASAP.



### Getting HSSE Right

#### **NEAR MISS REPORT**



#### **Eight Golden Rules**

- 1. Permit To Work
- 2. Energy Isolation
- 3. Ground Disturbance
- 4. Confined Space Entry
- 5. Working At Heights
- 6. Lifting Operations
- 7. Driving Safety
- 8. Management Of Change

NO HARM TO THE ENVIRONMENT NO HARM TO PEOPLE NO ACCIDENTS

#### **Expectation**

Everone has an obligation to stop work that is unsafe

HSSE meeting discussing, among other topics, facility and job hazards, incidents, near-misses, site-specific safety and health rules, and site-specific procedures.

Date:	
Person Reporting:	
Near Miss Subject:	
Near Miss Causes:	
Near Miss Solution:	



#### Getting HSSE Right

#### **Eight Golden Rules**

- 1. Permit To Work
- 2. Energy Isolation
- 3. Ground Disturbance
- 4. Confined Space Entry
- 5. Working At Heights
- 6. Lifting Operations
- 7. Driving Safety

Date:

8. Management Of Change

#### **HSE POLICY**

NO HARM TO THE ENVIRONMENT NO HARM TO PEOPLE

NO ACCIDENTS

#### **EMS CONCEPTS**

COMPLIANCE WITH REGULATIONS POLLUTION PREVENTION

CONTINUAL IMPROVEMENT

#### **Geo-Link's Expectation**

Everyone has an obligation to stop work that is unsafe

HSSE meeting discussing, among other topics, facility and job hazards, incidents, near-misses, site-specific safety and health rules, and site-specific procedures.

Date.	
Topics	
Discussed:	
Attendees:	



### Getting HSSE Right

#### ACCIDENT REPORT

#### **Eight Golden Rules**

- 1. Permit To Work
- 2. Energy Isolation
- 3. Ground Disturbance
- 4. Confined Space Entry
- 5. Working At Heights
- 6. Lifting Operations
- 7. Driving Safety
- 8. Management Of Change

#### NO HARM TO THE ENVIRONMENT

NO HARM TO PEOPLE

NO ACCIDENTS

#### **Expectation**

Everone has an obligation to stop

work that is unsafe

HSSE meeting discussing, among other topics, facility and job hazards, incidents, near-misses, site-specific safety and health rules, and site-specific procedures.

Date:		
Person Reporting:		
Description of Accident:		
Care Required:		
. toquirou.		
Preventative		
Measures:		

#### **PPE Hazard Assessment Certification**

Conducted by: Jed Adams	Date:
Job Title: Operations Manager	
Location of Joh:	

Hazard Key		Body Part Key		Required PPE Key	
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.	Abrasion / Cut / Penetration Burn Caught between Compression / roll over Drowning / engulfment Electrical shock Exposure-chemical Exposure-environmental Foreign body / Flying particles Impact Inhalation / atmospheric Noise Overexertion Pinch point Radiation (radiant/optical) Slip-trip-fall Splash / spill Strain / sprain Struck by-against Visibility / lighting Other	b. c. d. e. f. g. h. i. j. k.	Head Face Eye(s) Ear(s) Respiratory system Trunk Arm(s) Hand(s) Fingers Leg(s) Feet / foot Toe(s) Total body Other	C. D. E. F.	Chemical Goggles Safety Glasses / Shielded lenses Ear Plugs / Muffs Face Shield FRC / Nomex Full Body Harness Gloves Cotton or canvas Insulated for heat Rubber insulated electrical Leather Chemical resistant Shoes/Boots Steel-toed Rubber Respirator (list type) Atmospheric monitoring Goggles Safety glasses with filter lenses

Activities/Tasks	Potential Hazards	Body Part(s)	Required PPE
Repeatedly walking across location	2,10,12,14,1618, 19	m	A,C,D,F,H,I
Taking samples	9	b,c	С
Rigging up/Rigging Down	1,2,4,6,10,12,13, 14,16,18,19	m	A,C,D,F,H,I
Welding	2	m	C,E,F,H

#### **General**

In accordance with 29 CFR 1910.132, Geo-Link, Inc. shall provide hazard assessments for at each job site or group of job sites for the purpose of determining what hazards are present or likely to be present which would necessitate the use of personal protective equipment (PPE). The PPE Hazards Assessment will be documented utilizing the form on the reverse side.

Where administrative or engineering controls do not fully provide the necessary protection to employees, Geo-Link, Inc. will utilize personal protective equipment (PPE) as its primary method of protecting employee health and safety. Geo-Link, Inc. shall provide all required and necessary PPE to the employees on a job site. All PPE shall comply with the appropriate regulation governing its design and use.

Protective equipment, including PPE for eye, face, head, and extremities, protective clothing, respiratory protection, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition whenever it is necessary by reason of process hazards, environment, chemical or radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.

#### **Hazards Assessment Certification and Equipment Selection**

Geo-Link, Inc. Safety Professionals assigned to the project shall be responsible for developing and maintaining the PPE Hazard Assessment Certification for each site, group of sites, or project. The Safety Professional shall select appropriate PPE based upon the known or expected hazards likely to be present for each job task/duty, prohibit the use of damaged or defective equipment, and assure that each employee is properly trained in the use of assigned PPE.

The PPE Hazard Assessment Certification must be documented on the form on the reverse side and identify the work area being assessed, the date of the assessment, and the name(s) of the person(s) performing the assessment. The Safety Professional with input from employees and supervisors will identify each activity or task, the potential hazards associated with that activity or task, the affected body part, and the required PPE.

#### **Training**

Prior to being issued any type of PPE employees shall be trained to know at least the following:

- 6) When PPE is necessary.
- 7) What PPE is necessary.
- 8) How to properly don, doff, adjust, and wear the PPE.
- 9) The proper care, maintenance, useful life and disposal of PPE.
- 10) The limitations of the PPE.

Employees shall demonstrate an understanding of the training and the ability to use the PPE prior to performing any actual work using the PPE.

Retraining of employees shall be required as follows:

- 4) When an employee who has already been trained demonstrates he/she does not have the understanding or the skill required to use the PPE.
- 5) Changes in the workplace render training obsolete.
- 6) Changes in PPE to be used render the training obsolete.

Geo-Link, Inc. shall verify that each affected employee using PPE has received the required training through a written certification that contains the name of each employee, the date(s) of training, and the subject of the certification.

#### **Management of Change Form**

Description of the change being record that the change is necessary:	mmended. Include a description of the change and the reason
Person recommending the change:	
Supervisor's concurrence that chang	e is necessary:
•	. Was Manufacturer consulted? Was an Engineering Were any cautions expressed in order to implement the
APPROVAL:	
Operations Manager:	Date:
Owner:	Date:

This signed Management of Change Form is the necessary authorization to perform the Change as recommended and/or modified during the evaluation.



## In Case of Emergency & Information

P.O. Box 1764 Red Lodge, MT 59068 (307) 324-4884 FAX (307) 324-3863

		Personal Infor	mation		
	Name:				
	Address:				
	Email(s):				
	Cell:				
	·	Vehicle Inform	nation		
	Personal	veincie iinoii	Geo-Link		
Year:		Year:_		_	
Make:		Make:_		_	
Model:		Model:		<del>_</del>	
Color:		Color:_		_	
License plate:		License plate:_		_	
	·····	Emergency Co	ontacts		
	Name: Relationship: Phone:				
	Name: Relationship: Phone:				
	Name: Relationship: Phone:				



## **JSA**

Well Name & Number:		Geo-Link Supervisor:	
		Crew Names:	
		Standby Person (if required):	
		Primary Muster Point:	
Ending Time:		Secondary Muster Point:	
Work Plan / Order of Work /	Safest Plan?		
Revisions:			
		WSL Revisions Signature:	
Potential Hazards:			
Hazards associated w/ spe	ecific rig operations:		
Actions taken to eliminate haza	ards:		
Additional Precautionary Mea	asures:		
	uipment/Procedures Required:		
Safety Harness:		Heavy Lifting:	
<u></u>	Cold Weather Gear:		
Steel Toe Boots:			
Safety Glasses:	Personal Hazards:	WSL:	
Hard Hat:	Enviro Hazards:	WSI Signature	



## Rig Check JSA

Well Name & Number:		Geo-Link Supervisor:	
		Crew Names:	
		Primary Muster Point:	
Ending Time:		econdary Muster Point:	
Work Plan / Order of Work /	Safest Plan?	·	
Drive to the rig. Sign in and call	in to the WSL for admittance to location	on. Sign in at Rig manager's shack. Have WSL review JSA and	
accept it by signing at the bottor	n. Gather well information from variou	is sites on location. Collect samples from pits. Check gas trap,	
and clean, if necessary. Run test	gas, if necessary. Rerun polyflo and spl	ice, if necessary. Check system status, and ensure that all readings	
are being taken correctly. Ensure	e communication between Geo-Link sy	rstem and EDR system. Sign out at Rig Manager's shack. Sign out	
at gate to location. Drive back to	office.		
Revisions:			
		WSL Revisions Signature:	
Potential Hazards:			
Road hazards. Stored energy. Slip	p/Trip hazards. Potential poor lighting.	Tool slippage. Overhead hazards. Strain from lifting.	
Hazards associated w/ spe	ecific rig operations:		
Actions taken to eliminate haza	ards:		
Wear seat belt at all times, and p	ractice safe driving metods such as follo	owing speed limit. Isolate energy, if necessary, before working on	
electrical equipment. Be sure of	footing, and focus on slip/trip hazards	s. Always use hand rails when going up or down stairs. Carry and	
use an explosion-proof flash ligh	ht in poor lighting situations. Tie off to	ols. Focus on buffer zones and stay out from under overhead	
hazards. Use proper lifting techn	aiques, and use two people if equipmen	nt is too heavy for one person. Follow 8 Golden Rules.	
Additional Precautionary Mea	sures:		
·			
	uipment/Procedures Required:		
Safety Harness:	•	Heavy Lifting:	
	Cold Weather Gear:		
Steel Toe Boots:		<del></del>	
	Personal Hazards:		
	F nviro Hazards:		



## Lite Rig Up JSA

Well Name & Number:	Name & Number: Geo-Link Supervisor:		
Drilling Rig: Crew Names:			
Date: Standby Person (if required):			
Beginning Time:	<b>P</b> i	Primary Muster Point:	
Ending Time:	Seco	ondary Muster Point:	
Work Plan / Order of Work / Sa	nfest Plan?		
Drive to the rig. Sign in and call in	to the WSL for admittance to location.	. Sign in at Rig manager's shack. Have WSL review JSA and	
accept it by signing at the bottom.	Check M-logger to make sure it is set u	up for the new well. Check satellite system to ensure	
internet connection. Check for pr	oper communication between Geo-Lin	nk system and EDR system. Switch polyflo to "Sample In" po	ort.
Hook up exhaust lines and run the	em out of the trailer. Check filters on M	M-logger. Change out dryer if necessary. Set gas trap to prope	er
depth in Possum Belly. Run test g	asses through system, and calibrate. Ren	run polyflo and splice, if necessary. Notify WSL of system st	tatus.
Sign out at Rig Manager's shack. Si	gn out at gate to location. Drive back to	office.	
Revisions:			
		WSL Revisions Signature:	
Potential Hazards:			
Road hazards. Stored energy. Slip/	'Trip hazards. Potential poor lighting. T	Fool slippage. Overhead hazards. Strain from lifting.	
	ific rig operations:		
-			
Actions taken to eliminate hazard	ls:		
Wear seat belt at all times, and pra-	ctice safe driving metods such as follow	wing speed limit. Isolate energy, if necessary, before working	gon
electrical equipment. Be sure of fe	ooting, and focus on slip/trip hazards. A	Always use hand rails when going up or down stairs. Carry a	ınd
use an explosion-proof flash light	in poor lighting situations. Tie off tool	ls. Focus on buffer zones and stay out from under overhead	ŀ
hazards. Use proper lifting technic	ques, and use two people if equipment i	is too heavy for one person. Follow 8 Golden Rules.	
Additional Precautionary Measu	ires:		
Tools, Materials, & Safety Equip	oment/Procedures Required:		
Safety Harness:	•	Heavy Lifting:	
	Cold Weather Gear:	<del></del>	
Steel Toe Boots:			
	Personal Hazards:		
Hard Hat:	Enviro. Hazards:	WSL Signature:	



## Lite Rig Down JSA

Well Name & Number:		Geo-Link Supervisor:	
		Crew Names:	
		lby Person (if required):	
		Primary Muster Point:	
Ending Time:		Secondary Muster Point:	
Work Plan / Order of Work /	Safest Plan?		
Drive to the rig. Sign in and call	in to the WSL for admittance to locati	on. Sign in at Rig manager's shack. Have WSL review JSA and	
accept it by signing at the bottor	n. Clean gas trap at the shakers, and rais	se gas trap above flow level in Possum Belly. Replace dryer.	
Change polyflo over to "Exhaus	t" port at M-logger to blow back towar	d gas trap. Nuke M-logger. Set M-logger up for new well.	
Sign out at Rig Manager's shack.	Sign out at gate to location. Drive back	to office.	
Revisions:			
		WSL Revisions Signature:	
Potential Hazards:			
	p/Trip hazards. Potential poor lighting	g. Tool slippage. Overhead hazards. Strain from lifting.	
•			
Actions taken to eliminate haza	ards:		
Wear seat belt at all times, and pr	ractice safe driving metods such as foll	lowing speed limit. Isolate energy, if necessary, before working on	
		ls. Always use hand rails when going up or down stairs. Carry and	
use an explosion-proof flash ligh	ht in poor lighting situations. Tie off t	ools. Focus on buffer zones and stay out from under overhead	
		ent is too heavy for one person. Follow 8 Golden Rules.	
	sures:		
·			
	uipment/Procedures Required:	77 T.G.	
Safety Harness:			
<u></u>	Cold Weather Gear:	<del></del>	
Steel Toe Boots:			
	Safety Glasses: Personal Hazards: WSL: WSL Signature:		
naro har	E HVIEO H 272FGS!	wat atomanire:	



## Geo-Link Stop Card

Stop Card Number:\_\_\_\_\_

General Information			
Reported:	Repor	t Type:	Operations:
SUBMITTED BY:	S	TOP:	DRILLING:
REPORTED TO:			NTENANCE:
DATE:	HEA	LTH: CONS	TRUCTION:
TIME:	SAF	ETY:	DRIVING:
LOCATION:		ENT:	OFFICE:
			OTHER:
First Aid/Hazard Identificat	tion		
Type of Injury:	Incident Potent	ial:	
BRUISE:	Injury To:		
BURN:		UAL:	
CUT:	GR	OUP:	
SCRAPE:	Damage To:		
STRAIN:	ENVIRONM	ENT:	
OTHER:		ENT:	
NONE:	PROPE	RTY:	
Immediate Causes:			
Actions:		Conditions:	
NOT FOLLOWING PF	ROCEDURE:	MISSING PROTECTIV	E SYSTEMS:
IMPROPER USE/INCORRE	ECT TOOLS: DEFECTIVE TOOLS/EQUIPME:		QUIPMENT:
BYPASSING PROTECTIVE	METHODS:	INADEQUATE W	ORKSPACE:
INATTE	NTIVENESS:		OTHER:
	OTHER:		
Behavior Observations			
PPE:		Policies & Procedu	ires:
HEAD:	ARMS & HANDS:	NOT ESTABLISH	ED:
EYES & FACE:	TRUNK:	INADEQUA	TE:
EARS:	LEGS & FEET:	NOT UNDERSTOO	OD:
RESPIRATORY:	CORRECT TOOLS?:	NOT FOLLOW	ED:
Briefly describe the incident	and actions taken to corre	ct it:	