



**L&M**  
**UNDERGROUND**

**Inc.**

# **L & M Underground, Inc.**

## **Employee Safety Program Manual**

L & M Underground, Inc., Inc.

**An Employee Guide to Safety Policies and Procedures  
to Support a Safety-Conscious Work Environment**

Provided by: CRS Insurance Brokerage  
Last updated 4/21/2020

Legal disclaimer to users of this form employee handbook:

The materials presented herein are for general reference only. Federal, state and/or local laws, or individual circumstances, may require the addition of policies, amendment of individual policies, and/or the entire Handbook to meet specific situations. These materials are intended to be used only as guides and should not be used, adopted, or modified without the advice of legal counsel. These materials are presented, therefore, with the understanding that the Company is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional should be sought.

## Commitment to Safety

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L & M Underground, Inc. recognizes that our people drive the business. As the most critical resource, employees will be safeguarded through training, provision of appropriate work surroundings, and procedures that foster protection of health and safety. All work conducted by L & M Underground, Inc.'s employees will take into account the intent of this policy. No duty, no matter what its perceived result, will be deemed more important than employee health and safety.

L & M Underground, Inc. is firmly committed to the safety of our employees. We will do everything possible to prevent workplace accidents and we are committed to providing a safe working environment for all employees. We value our employees not only as employees but also as human beings critical to the success of their family, the local community, and L & M Underground, Inc.

Employees are encouraged to report any unsafe work practices or safety hazards encountered on the job. All accidents/incidents (no matter how slight) are to be immediately reported to the supervisor on duty.

A key factor in implementing this policy will be the strict compliance to all applicable federal, state, local, and Company policies and procedures. Failure to comply with these policies may result in disciplinary actions.

Respecting this, L & M Underground, Inc. will make every reasonable effort to provide a safe and healthful workplace that is free from any recognized or known potential hazards. Additionally, L & M Underground, Inc. subscribes to these principles:

1. All accidents are preventable through implementation of effective Safety and Health Control policies and programs.
2. Safety and Health controls are a major part of our work every day.
3. Accident prevention is good business. It minimizes human suffering, promotes better working conditions for everyone, holds L & M Underground, Inc. in higher regard with customers, and increases productivity. This is why L & M Underground, Inc. will comply with all safety and health regulations that apply to the course and scope of operations.
4. Management is responsible for providing the safest possible workplace for Employees. Consequently, management of L & M Underground, Inc. is committed to allocating and providing all of the resources needed to promote and effectively implement this safety policy.
5. Employees are responsible for following safe work practices and company rules, and for preventing accidents and injuries. Management will establish lines of communication to solicit and receive comments, information, suggestions and assistance from employees where safety and health are concerned.
6. Management and supervisors of L & M Underground, Inc. will set an exemplary example with good attitudes and strong commitment to safety and health in the workplace. Toward this end, Management must monitor company safety and health performance, working environment and conditions to ensure that program objectives are achieved.
7. Our safety program applies to all employees and persons affected or associated in any way by the scope of this business. Everyone's goal must be to constantly improve safety awareness and to prevent accidents and injuries.

Everyone at L & M Underground, Inc. must be involved and committed to safety. This must be a team effort. Together, we can prevent accidents and injuries. Together, we can keep each other safe and healthy in the work that provides our livelihood.



President

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## Employee Safety Responsibilities

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The primary responsibility of the employees of L & M Underground, Inc. is to perform his or her duties in a safe manner in order to prevent injury to themselves and others.

As a condition of employment, employees **MUST** become familiar with, observe, and obey L & M Underground, Inc.'s rules and established policies for health, safety, and preventing injuries while at work. Additionally, employees **MUST** learn the approved safe practices and procedures that apply to their work. Before beginning special work or new assignments, an employee should review applicable and appropriate safety rules.

If an employee has any questions about how a task should be done safely, he or she is under instruction **NOT** to begin the task until he or she discusses the situation with his or her supervisor. Together, they will determine the safe way to do the job.

If, after discussing a safety situation with his or her supervisor, an employee still has questions or concerns, he or she is required to contact the Safety Coordinator. Mike Slater, President of L & M Underground, Inc. is the designated Safety Coordinator for the Company.

**NO EMPLOYEE IS EVER REQUIRED** to perform work that he or she believes is unsafe, or that he or she thinks is likely to cause injury or a health risk to themselves or others.

### **General Safety Rules**

#### **Conduct**

Horseplay, 'practical jokes,' etc., are forbidden. Employees are required to work in an injury-free manner displaying accepted levels of behavior. Conduct that places the employee or others at risk, or which threatens or intimidates others, is forbidden.

#### **Drugs and Alcohol**

Use and/or possession of illegal drugs or alcohol on company property or on company time are forbidden. Reporting for work while under the influence of illegal drugs or alcohol is forbidden. Refer to L & M Underground's Substance Abuse Program for more detailed information on this policy.

#### **Housekeeping**

You are responsible to keep your work area clean and safe. Clean-up several times throughout the day, disposing of trash and waste in approved containers, wiping up any drips/spills immediately, and putting equipment and tools away as you are finished with them.

The following areas must remain clear of obstructions:

- Aisles/exits
- Fire extinguishers and emergency equipment
- All electrical breakers, controls, and switches

## **Accident, Near-Miss and Injury Reporting**

All work-related injuries must be reported to your supervisor immediately. Failure to immediately report injuries can result in loss of Workers' Compensation benefits. After each medical appointment resulting from a work-related injury, you must contact your supervisor to discuss your progress. You must also give your supervisor any paperwork that you received at the appointment. See more detail Page 7.

## **Off-Site Safety**

- a. Employees of L & M Underground, Inc. are required to follow all safety and security procedures during off-site visits.
- b. If your contact person does not advise you regarding safety hazards, consider the following:
  - Emergency exit location(s);
  - Keep your eye on the path you are walking and avoid any tripping/slipping hazards. When on stairs maintain three point contact (hand on rail and feet on stairs);
  - When visiting construction sites, eye protection, hearing protection, and hard hats are required. This equipment will be in the possession of the L & M Underground, Inc. employee and not provided by the client
  - Wear shoes that support your feet and are slip resistant.
  - Avoid clothing that is either constrictive or too loose; loose clothing can get caught in machinery or other equipment.

These rules are established to help you stay safe and injury free. Violation of the above rules, or conduct that does not meet minimum accepted work standards, may result in discipline, up to and including discharge.

When working at a customer location, employees are required to follow the above rules, as well as all customer rules and procedures, and work in a manner that reflects positively on the company. Before operating any equipment at a customer location, permission must first be secured from the customer contact.

## **Periodic Inspections**

It is the policy of our Company that workplaces are subject to periodic inspections to ensure ensure implementation and execution of our safety policies and procedures as well as compliance with applicable laws and regulations.

All employees are responsible for cooperating during these inspections and managers and supervisors are responsible for initiating corrective actions to improve items discovered during the walk-through inspection.

## Safety Orientation and Training

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The Company is committed to providing safety and health related orientation and training for all employees at all levels of the Company. The Company will maintain and support a program to educate and familiarize employees with safety and health procedures, rules, and safe work practices. The training subjects and materials have been developed using industry best practices criteria and site-specific data.

### **ORIENTATION TRAINING**

The training may include, but not be limited to the following:

1. Review of L & M Underground Employee Safety Program Manual
2. Substance Abuse Policy Orientation
3. Company specific accident and incident data
4. Hazards associated with HDD, Potholing and General Excavation
5. Hazards associated with a specific job or task
6. Operation of specific equipment
7. Personal protective equipment
8. Emergency procedures
9. Employee accident reporting requirements
10. Any OSHA required training not included or addressed above.

### **ON GOING TRAINING AND CERTIFICATIONS**

L & M Underground, Inc. is committed to project safety and therefore will provide on-going training in the form of weekly Tool-box Safety Meetings, Daily Project Safety Briefings, as well as job specific training as needed. All job sites will have a Competent Person present. All Supervisors are required to meet the Competent Person training requirements. L & M Underground, Inc. will provide the necessary training including, but not limited to all OSHA required training, First Aid and CPR training, Substance Abuse. L & M Underground, Inc. will maintain training records to ensure that training certificates are up to date. All employees are required to submit copies of their training certificates to Human Resources.

## Incident Reporting

It is our goal to prevent work-related injuries from happening. We are always concerned when one of our employees is injured or ill due to a work-related condition. We believe that such absences cost both L & M Underground, Inc. and its employees. We want our injured employees to get the best possible medical treatment immediately to assure the earliest possible recovery and return to work.

L & M Underground, Inc. has a workers' compensation program available for employees who have suffered work-related injuries. The program's administrator will determine, based upon their guidelines, whether you are eligible for wage loss or medical expenses under that program.

### **Employee Procedures**

- An Accident Investigation Form must be completed for all accidents and near-misses. Any work-related injury or suspected injury must be reported immediately to your supervisor, Job Site Foreman and to Human Resources. An Accident Investigation Form must be completed. Failure to promptly report an injury may result in disciplinary action.
- After each practitioner appointment, the employee must report to his/her supervisor and Human Resources to review his/her progress.
- An accident or near-miss investigation will be conducted to determine the root cause of the accident. The injured employee and other employees witnessing the accident or near-miss will be asked to participate in the investigation.
- Your supervisor will instruct you in regards to the requirement of a **post-accident drug screen**. Refer to the company Substance Abuse Policy for more details.
- When medical treatment is sought, the injured employee must advise their supervisor that they are seeking treatment and obtain a Return to Work Evaluation form. Regardless of the choice of physicians, the Return to Work form must be completed for each practitioner visit. L & M Underground, Inc. will not accept a general note stating that you are only to be off of work.
- If you are unable to return to your regular job, but are capable of performing transitional light duty, you must return to transitional duty if available. Failure to do so will result in your not being eligible for full disability benefits under the workers' compensation program, and may result in disqualification for certain employee benefits and, in some cases, be a basis for termination.
- Employees who are unable to work and whose absences L & M Underground, Inc. approves must keep us informed on a weekly basis of their status. Failure to do so will result in a reduction in benefits available and discipline, up to and including termination from employment.
- If you are unable to return to any available work, your job position may be filled after a reasonable time. When able to do so, you will be entitled to return to a suitable position, if available and consistent with any limitations. However, you must keep us regularly informed of your status and any changes in your condition.
- Employees must provide a Return to Work form indicating they are capable of returning to full duty. Permanent restrictions will be evaluated on a case-by-case basis and relate to the performance of essential job functions. No permanent light duty positions will be created.

## General Emergency Guidelines

- Stay calm and think through your actions
- Know the emergency numbers:
- Fire/Police/Ambulance 911
- Internal Emergency Number: 303-933-1970 or 720-253-4686.
- Human Resources Administrator - Lori Slater 303-933-1970 or 720-339-6886.
- Know where the exits are located
- In the event of any emergency, do not take elevators; use the stairs
- Do not hesitate to call or alert others if you believe that an emergency is occurring; you will not "get in trouble."
- First aid supplies and emergency equipment are located in each vehicle for use by those who are authorized and properly trained.

## Evacuation

- Employees will be notified of a fire alarm either by the fire alarm system or by a paged announcement.
- Upon becoming aware of a fire alarm, employees should immediately evacuate the job site. Do not delay evacuation to get personal belongings or to wait for co-workers. Also, all doors should be closed as the last person passes through. (Note: never use elevators during fire alarm situations).
- Supervisors should be the last persons to leave the area. Check the job site to be sure that all personnel have evacuated.
- Any employee having mobility, visual, hearing, or other condition, which may hinder them from becoming aware of an emergency or evacuating, should request special assistance through Human Resources.
- Upon exiting the building, all personnel should report for a headcount.
- If any employee is missing, an immediate report should be made to the incident commander who will in turn report to the first available fire department officer.
- Employees should stay together in a group so that periodic updates on the situation can be issued.
- The order to re-occupy a job site or building will be issued by the incident commander.
- In the event of inclement weather, the incident commander will make arrangements for all personnel to move to shelter.

## Fire Safety

- Alert other persons in the immediate hazard area.
- Activate a fire alarm or call [insert name] to page an emergency announcement.
- If you have been trained, you can decide to use a fire extinguisher following these instructions:
  - P=Pull the safety pin
  - A=Aim the nozzle at the base of the fire
  - S=Squeeze the operating lever
  - S=Sweep side to side covering the base of the fire

*\*When using a fire extinguisher, always stay between the fire and an exit; stay low and back away when the fire is extinguished.*

*\*Never feel that using a fire extinguisher is required. If the fire is too hot, too smoky or you are frightened, evacuate.*

## Emergency Action Plan

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- Have someone notify the incident commander of where the emergency is located. He/she will relay this information to the fire department.

### **Medical Emergency**

- Upon discovering a medical emergency, call 911.
- Notify the supervisor and report the nature of the medical emergency and location.
- Stay with the person involved, being careful not to come in contact with any bodily fluids.
- Employees in the immediate vicinity of the emergency, but not directly involved, should leave the area.
- Human Resources will make any necessary notifications to family members of the person suffering the medical emergency

### **Severe Weather**

- The supervisor will monitor a weather alert radio. If a severe weather report is issued, she/he will immediately alert all personnel at the jobsite.
- Employees will shut down all equipment and will be instructed where to go for safety. The supervisor will take the weather radio with her/him. When the severe weather warning is cancelled, she/he will send runners to advise that it is safe to return to work areas. A general announcement will also be made.

### **Emergency Contact Information**

The following Emergency Contact form shall be completed and located at each job site.

## Emergency Contact Information

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FIRE DEPARTMENT: 911

POLICE DEPARTMENT: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

EMERGENCY MEDICAL SERVICES (AMBULANCE): \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

HOSPITAL: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

DOCTOR: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

### JOBSITE TELEPHONE NUMBERS:

PROJECT NAME/NUMBER:

\_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

SITE SUPERINTENDENT: \_\_\_\_\_

Cell/Home TELEPHONE: \_\_\_\_\_

CLIENT CONTACT: \_\_\_\_\_

OFFICE TELEPHONE: \_\_\_\_\_

Cell/Home TELEPHONE: \_\_\_\_\_

## Harassment Policy

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The Company does not tolerate harassment of our job applicants, employees, clients, guests, vendors, customers, or persons doing business with us. Any form of harassment related to an employee's race, color, sex, religion, national origin, age, citizenship status, veteran status, or handicap is a violation of this policy and will be treated as a disciplinary matter. For these purposes, the term harassment includes, but is not limited to, slurs, jokes, or other verbal, graphic, or physical conduct relating to an individual's race, color, sex, religion, or national origin; sexual advances; requests for sexual favors and other verbal, graphic, or physical conduct of a sexual nature.

Violation of this policy by an employee shall subject that employee to disciplinary action, up to and including immediate discharge.

Examples of conduct prohibited by this policy include but are not limited to:

- Unwelcome sexual flirtation, advances, or propositions;
- Verbal comments related to an individual's age, race, gender, color, religion, national origin, disability, or sexual orientation;
- Explicit or degrading verbal comments about another individual or his/her appearance;
- The display of sexually suggestive pictures or objects in any workplace location including transmission or display via computer;
- Any sexually offensive or abusive physical conduct;
- The taking of or the refusal to take any personnel action based on an employee's submission to or referral of sexual overtures; and
- Displaying cartoons or telling jokes that relate to an individual's age, race, gender, color, religion, national origin, disability, or sexual orientation.

If you believe that you are being subjected to workplace harassment, you should:

1. Tell the harasser that his or her actions are not welcome and they must stop, if you feel comfortable enough to do so.
2. Report the incident immediately to your Manager, the Human Resources Manager, or the Employee Relations Department.
3. Report any additional incidents that may occur to one of the above resources.

Any reported incident will be investigated. Complaints and actions taken to resolve complaints will be handled as confidentially as possible, given L & M Underground, Inc.'s obligation to investigate and act upon reports of such harassment.

## Workplace Violence

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- Any employee who feels that she/he has been threatened should immediately report their concern to the supervisor and to Human Resources.
- If any person is observed exhibiting threatening behavior or making threatening statements, the person discovering the situation should warn others in the area and immediately notify Human Resources and stay away from the person exhibiting threatening behavior.
- Depending upon the level of concern, the police department (911) should be called immediately.
- Never attempt to confront any person exhibiting threatening behavior.

If you have reason to believe that events in your personal life could result in acts of violence occurring at work, you are urged to confidentially discuss the issue with Human Resources so that a prevention plan can be developed.

## Access to Employee Exposure & Medical Records

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Employees and former employees, who are, have been, or will be exposed to toxic substances or harmful physical agents, such as noise, can have access to exposure and medical records maintained by the Company upon request.

## Vehicle Use Policy

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To: All drivers of L & M Underground, Inc.

- This policy applies to:
  - Vehicles owned, leased, or rented to L & M Underground, Inc..
  - Personally owned vehicles driven by employees on behalf of L & M Underground, Inc..

The following policy has been established to encourage safe operation of vehicles, and to clarify insurance issues relating to drivers and L & M Underground, Inc..

- All drivers must have a valid driver's license.
- Motor Vehicle Records will be checked periodically. Driving privileges may be suspended or terminated if your record indicates an unacceptable number of accidents or violations. Should your record fall into our insurance carrier's guidelines of an 'unacceptable driver,' your employment may be terminated.
- Your supervisor must be notified of any change in your license status or driving record.

When operating your own vehicle for L & M Underground, Inc. business:

- Your Personal Auto Liability insurance is the primary payer. L & M Underground, Inc.'s insurance is in excess of your coverage.
- You should carry at least \$300,000 per occurrence liability coverage. Evidence of insurance coverage is to be provided to L & M Underground, Inc. each year, by a copy of your policy's Declaration page or a Certificate of Insurance.
- L & M Underground, Inc. is not responsible for any physical damage to your vehicle. You must carry your own collision and comprehensive coverage.

In the event of an accident:

- Take necessary steps to protect the lives of yourself and others.
- Comply with police instructions.
- Do not assume or admit fault. Others will determine liability and negligence after thorough investigation.
- Report the accident to L & M Underground, Inc. as soon as possible.

By signing this document, you are agreeing that you have read and understood the Vehicle Use policy and will comply with it.

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Employee's Signature

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Date

*Motor Vehicle Record (MVR) Grading Criteria [Last 3 Years]*

The following chart serves as a guideline for evaluating an employee’s Motor Vehicle Record (MVR). An employee with an MVR grade of “poor” will possibly not be insurable by our insurance carrier and could jeopardize their employment if they are unable to be insured. Note that any “major” violation is a “poor” score.

<i>Minor Violations</i>	Number of at-fault accidents			
	0	1	2	3
0	Clear	Acceptable	Borderline	Poor
1	Acceptable	Acceptable	Borderline	Poor
2	Acceptable	Borderline	Poor	Poor
3	Borderline	Poor	Poor	Poor
4	Poor	Poor	Poor	Poor
<i>Any Major violation</i>	Poor	Poor	Poor	Poor

<b>Minor Violation</b>	<b>Major Violations</b>
All moving violations not listed as a major violation.	<ul style="list-style-type: none"> <li>▪ Driving under influence of alcohol/drugs</li> <li>▪ Failure to stop/report an accident</li> <li>▪ Reckless driving/speeding contest</li> <li>▪ Driving while impaired</li> <li>▪ Making a false accident report</li> <li>▪ Homicide, manslaughter or assault arising out of the use of a vehicle</li> <li>▪ Driving while license is suspended/revoked</li> <li>▪ Careless driving</li> <li>▪ Attempting to elude a police officer</li> </ul>

### Hazard Communication

1. All L & M Underground, Inc. employees have a right to know what chemicals they work with, what the hazards are, and how to handle them safely.
2. Material Safety Data Sheets (MSDS) are documents provided by the supplier of a chemical. MSDS detail the chemical contents, associated hazards, and general safe handling guidelines. At L & M Underground, Inc., the MSDS collection is located at [insert location]. Employees are free to utilize the MSDS as needed.
3. General rules for handling chemicals in an office environment are:
  - Read all label warnings and instructions.
  - Follow instructions for quantity. More is not better.
  - Minimize contact with chemicals. Use double layer cloths or gloves to protect your skin and keep your face clear of the area to reduce inhalation.
  - Always wash your hands after handling chemicals.
  - If a chemical enters your eye(s) immediately hold open the injured eye(s) and rinse it/them with clean, cool water for 15 minutes. Then be sure to report the injury immediately.
  - Any questions or concerns regarding chemicals should be reported to your Job Site Manager and Human Resources.
4. All chemical containers must be labeled to identify contents and hazards. Most labels use numbers to rank the hazard level in three important areas:
  - **FIRE** (red background color) - will the material burn?
  - **HEALTH** (blue background) - is the material dangerous to my body?
  - **REACTIVITY** (yellow background) - is the material dangerously unstable?

After each hazard (Fire, Health, and Reactivity), a number from 1-4 will be assigned. The number reflects the degree (or amount) of hazard:

- 0** Minimal
- 1** Slight
- 2** Moderate
- 3** Serious

### Bloodborne Pathogens

1. Blood and other bodily fluids can carry pathogens, which are capable of causing diseases in others. This includes HIV, which leads to AIDS, and hepatitis.
2. Because we cannot tell by looking at a person if they are infected with a pathogenic disease, we must take precautions following an illness or injury when bodily fluids are released.
3. In the event of a person losing bodily fluids, stay away from the area and warn others to also do so. You can still stay close to the ill/injured person to support him/her, just be sure to stay out of contact any bodily fluids.
4. In the event that you find spilled bodily fluids, a syringe, or other medically contaminated materials, do not attempt clean up by yourself. Call Human Resources immediately for instructions.

### **Personal Protective equipment (PPE)**

Employees must at all time on the job site wear the appropriate PPE. Inspect PPE prior to each use. Do not use damaged PPE. You are required to maintain and keep PPE clean. Minimum required PPE includes the following:

- a) Safety Glasses – must be worn at all times on job site, yard and shop.
- b) Hard Hats – must be worn at all times in designated areas.
- c) Gloves – work gloves must be worn at all times. Cut resistant gloves are required when handling sharp or rough stock. Proper gloves for welding, or performing other jobs, which could cause hand injuries is required. Synthetic gloves must be worn when handling chemicals.
- d) Welding – appropriate filter lens, welding helmet, gloves, and sleeves are required for welders at all times.
- e) Hearing Protection – is required in areas where noise exposure is more than 85dBA.
- f) Respiratory Protection – Follow all OSHA requirements for Respiratory protection as applicable.
- g) Foot Protection – At a minimum employee must wear composite toe or steel toe boots with 6" tops to support the ankle. Foot protection should provide protection against slipping, uneven terrain, abrasion, crushing potential, puncture hazards, corrosive substances, temperature extremes and any other recognized hazards. Tennis shoes, non-protective hiking boots, sandals, dress shoes are not to be worn.
- h) Electrical shock protection – Employees are required to wear dielectric boots and gloves when potholing, operating drills and other excavation equipment, when excavating near power and any other time where a risk of electrical shock exists.

L & M Underground will provide employees with all of the above PPE with the exception of work boots, which must be provided by the employee.

### **Lockout/Tagout**

Prior to working on any machinery when guards are removed, every energy source (electrical, hydraulic, chemical, mechanical, etc.) must be deactivated, stored energy dissipated, and the control locked in the off (safe) position.

Never remove or tamper with a lockout performed by another employee or contractor. A lockout could consist of a lock applied to a control such as a switch, breaker, or valve. A tag containing words such as "DANGER - DO NOT OPERATE" may also be used for lockout. If you see the lock, the tag, or both applied to an energy control device it means, "Keep your hands off."

1. Do not perform any maintenance, inspection, cleaning, adjusting or servicing of any equipment without following the company's lockout/tagout program.
2. If required to work on powered equipment (hydraulic, electrical, air, etc.), you must have your personal padlock with your name on it and personal key on your person at all times.
3. Disconnect and padlock all machine power disconnects in the off position before removing guards for the purpose of working "ON" or "IN" the machinery or approaching its unguarded

parts. (NOTE: When more than one employee is working on a single piece of equipment, each employee must use his own padlock along with lock-out tongs to lock out the equipment. When the work is completed, he must remove only his lock.

4. Do not commence equipment repair or maintenance work until you have verified that the tagged/locked out switch or control cannot be overridden or bypassed.
5. Replace all guards before removing personal padlocks from the control.
6. Do not use or remove another employee's protective lock. Do not remove a lock from equipment unless you placed it there.
7. Before machinery is put back into use after LOCKOUT/TAGOUT, give a verbal announcement or sound a warning to fellow employees.

## OSHA Compliance Programs

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### **Confined Space**

Only trained and authorized employees are permitted to enter confined spaces. If you believe that your job requires confined space entry, contact your supervisor prior to undertaking the work. Confined spaces are areas not meant for human occupancy, have limited means of entry/exit, and have electrical, chemical, thermal, atmospheric, or entrapment hazards.

### **Respiratory Protection**

1. Do not perform operations requiring respirators, unless you have been approved for use of respirators, fitted and trained the company's respiratory protection program.
2. Inspect respirators for cracked or worn parts before and after each use and after cleaning.
3. Do not work in an area that requires the use of respiratory equipment, if you fail to obtain a tight seal between the respirator and your face.
4. Do not wear a respirator if facial hair prevents a tight seal between the respirator and your face.
5. Clean and sanitize respiratory equipment according to manufactures recommendations after each use.
6. Store respiratory equipment in a clean and sanitary location.

### Fire Prevention

1. Smoking is only allowed in designated exterior smoking areas.
2. No candles or open flames are allowed within the office facility.
3. Contractors performing hot work must contact [insert name] for approval.
4. Only space heaters provided by the company are approved for use within the facility. Employees using space heaters are responsible to turn the heater off when leaving their desk for extended periods of time (lunch, end of the workday, etc.).
5. No flammable chemicals are allowed inside the building at any time. If you feel that there is a work-related need to use a flammable chemical, contact the supervisor for guidance on Hazard Communication and fire safety.

### Electrical Safety

1. With the exception of independently fused multi-tap cords for computers, extension cords are not allowed in office areas.
2. Keep electrical cords out of areas where they will be damaged by stepping on or kicking them.
3. Turn electrical appliances off with the switch, not by pulling out the plug.
4. Turn all appliances off before leaving for the day.
5. Never run cords under rugs or other floor coverings.
6. Any electrical problems should be reported immediately.
7. The following areas must remain clear and unobstructed at all times:
  - Exit doors,
  - Aisles,
  - Electrical panels, and
  - Fire extinguishers.

## General Safety Precautions

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### Lifting

1. Plan the move before lifting; ensure that you have an unobstructed pathway.
2. Test the weight of the load before lifting by pushing the load along its resting surface.
3. If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or get assistance from a co-worker.
4. If assistance is required to perform a lift, coordinate and communicate your movements with those of your co-worker.
5. Position your feet 6 to 12 inches apart with one foot slightly in front of the other.
6. Face the load.
7. Bend at the knees, not at the back.
8. Keep your back straight.
9. Get a firm grip on the object using your hands and fingers. Use handles when they are present.
10. Hold the object as close to your body as possible.
11. While keeping the weight of the load in your legs, stand to an erect position.
12. Perform lifting movements smoothly and gradually; do not jerk the load.
13. If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
14. Set down objects in the same manner as you picked them up, except in reverse.
15. Do not lift an object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.
16. Never lift anything if your hands are greasy or wet.
17. Wear protective gloves when lifting objects that have sharp corners or jagged edges.

### Ladders & Stepladders

1. Read and follow the manufacturer's instructions label affixed to the ladder if you are unsure how to use the ladder.
2. Do not use ladders that have loose rungs, cracked or split side rails, missing rubber foot pads, or are otherwise visibly damaged.
3. Keep ladder rungs clean and free of grease. Remove buildup of material such as dirt or mud.
4. Do not place ladders in a passageway or doorway without posting warning signs or cones that detour pedestrian traffic away from the ladder. Lock the doorway that you are blocking with the ladder and post signs that will detour traffic away from your work.
5. Do not place a ladder at a blind corner or doorway without diverting foot traffic by blocking or roping off the area.
6. Allow only one person on the ladder at a time.
7. Face the ladder when climbing up or down it.
8. Maintain a three-point contact by keeping both hands and one foot or both feet and one hand on the ladder at all times when climbing up or down the ladder.
9. When performing work from a ladder, face the ladder and do not lean backward or sideways from the ladder. Do not jump from ladders or step stools.
10. Do not stand on tables, chairs, boxes or other improvised climbing devices to reach high places. Use the ladder or stepstool.
11. Do not stand on the top two rungs of any ladder.
12. Do not stand on a ladder that wobbles, or that leans to the left or right of center.
13. When using a straight or extension ladder, extend the top of the ladder at least three feet above the edge of the landing.
14. Secure the ladder in place by having another employee hold it if it cannot be tied to the structure.
15. Do not move a rolling ladder while someone is on it.
16. Do not place ladders on barrels, boxes, loose bricks, pails, concrete blocks or other unstable bases.
17. Do not carry items in your hands while climbing up or down a ladder.

### Housekeeping

1. Do not place materials such as boxes or trash in walkways and passageways.
2. Sweep up shavings from around equipment such as drill presses, lathes or planers by using a broom and a dust pan.
3. Mop up water around drinking fountains, drink dispensing machines and ice machines immediately.
4. Do not store or leave items on stairways.
5. Do not block or obstruct stairwells, exits or accesses to safety and emergency equipment such as fire extinguishers or fire alarms.
6. Do not block the walking surfaces of elevated working platforms, such as scaffolds, with tools or materials that are not being used.
7. Straighten or remove rugs and mats that do not lie flat on the floor.
8. Remove protruding nails or bend them down into the lumber by using a claw hammer.
9. Return tools to their storage places after using them.
10. Do not use gasoline for cleaning purposes.
11. Use caution signs or cones to barricade slippery areas such as freshly mopped floors.

### **GUIDELINES FOR HDD JOBSITE SAFETY**

Safety must start at the management level, and every employee must be committed to the safety program if it is to be effective. Each HDD job is different, but all must be approached with safety as the primary consideration. The manufacturer's operator's manual is the main source for information on specific HDD equipment and must be followed during all operations.

The following is a list of issues that should be addressed before starting work at a new location. These issues should be reviewed with everyone present at the beginning of each shift.

- Discuss specific hazards and procedures and document on jobsite safety checklist;
- Discuss location of emergency facilities;
- Discuss evacuation plan and emergency procedures
- Brief all personnel, subcontractors and visitors as they arrive;
- Record discussions on Daily Pre-Job Hazard Analysis Worksheet.

### **Responsible personnel**

#### **Competent Person**

The Competent person is responsible for ensuring that a safety briefing is provided for all authorized jobsite personnel prior to beginning operations and periodically during the project, and to assign duties to suitably qualified personnel. The Competent Person is also responsible for ensuring that generally accepted construction safety practices and suitable procedures are understood and followed by all personnel.

#### **Operators**

Operators of drilling, tracking, and support equipment must be deemed competent by the Competent Person, or supervised by a qualified operator. Operators must have continuous two way communication including two way radios.

#### **Support**

Prior to commencement of any boring activity, a hazard analysis should be performed to identify all perceived hazards. Procedures should then be created to remove, isolate or otherwise control the identified hazards. As with any construction operation, compliance with all OSHA, State and Local Regulations is required, regarding general safety practices for activities including:

- Vehicle operation
- Mobile equipment operation
- Noise
- Traffic control
- Verification of utilities
- Security of jobsite and isolation of hazards

- Manual lifting
- Trench Shoring and Sloping
- Confined-space Entry
- Hand tools
- Power tools
- Fall protection
- Material handling

Activities that are specific to HDD must also be addressed including:

- Rig operation
- Pilot bore tracking
- Utility clearances
- Electrical strike protection
- Rotating drill pipe
- Drilling fluid system operation
- Working on product side
- Communications
- Handling loose drill pipe
- Making/breaking tool joints

## **Underground**

Underground hazards to consider include:

- Electrical power cables, which can cause serious injury or electrocution if connected
- Fluid and gas pipes, which may transport asphyxiating, toxic, flammable, and/or explosive gases or liquids.
- Fiber optic cables carry laser light signals, which can cause eye damage
- Low-pressure sewage and storm water lines. These pose a unique hazard potential if an HDD gas or electric line has been installed that that has intersected the sewage line without detection. Subsequent maintenance or repair activity could cause a gas leak, explosion, or electrocution.

## **Surface**

The job site surface should be thoroughly evaluated for possible underground hazards.

- Transformer boxes should be checked by qualified utility workers to determine the number and orientation of lines entering the box. Ground grids should also be checked.
- Manholes within the drill area should be opened and inspected, without entry, to determine the underground utility it services. The direction of flow in a sewer should be checked to determine the approximate grade. This information can be used to project depth of the utility where the bore is being made.

## **Horizontal Directional Drilling (HDD) Jobsite Safety**

- Wires attached to poles should be assumed to be live.
- Water and gas shutoff depths should be confirmed to provide initial confirmation of the depths of the pipe and facilitate the potholing process. A minimum of 150 to 200 mm (6" to 8" should be added to depths for valves going to house services. Additional clearance may be required for large valves. This information can be used to facilitate potholing and is not itself a safe method of verifying the depth or location of the utility before construction.
- Out buildings (i.e. storage sheds) should be checked to determine if they have electrical wires or other utility services that may not be marked on any plans.
- Gas barbeque grills, outdoor lighting, etc. should be identified and services confirmed
- Ditch line depressions in the landscape or obvious changes in vegetation may reveal previous excavation and should be investigated.
- Road repairs may indicate the presence of recently installed or repaired utilities.
- Marker signs or casing vents at or near property lines indicate underground hazards.
- Private utilities and utilities that do not subscribe to the one-call system are not marked by One Call operators. The Contractor should check State and local regulations and Contract Documents to determine responsibility for verifying locations of unmarked utilities.

### **Overhead**

Overhead lines must be avoided. Overhead lines are of particular concern during mobilization/demobilization, while handling drill pipe, or loading and unloading heavy equipment. If the voltage is unknown, always maintain at least 6m (20ft.) of separation between equipment and power lines. If the voltage is known, OSHA regulations outline the required minimum separation. If necessary, place highly visible markers on either side of the overhead hazard or designate an individual to notify equipment operators as they approach.

### **Verify Utility Locates**

The location of all identified utilities must be verified using non-destructive methods of excavation. The bore profile must be designed to maintain acceptable clearances between underground utilities and structures, and the final reamed hole. Possible migration of the back reamer from the pilot bore toward the utility, due to excessive steering or tight radius, must be carefully considered when establishing clearances. As easements become increasingly congested, it may be necessary to increase the easement widths to accommodate demand for new utilities.

If there is any risk to the utility from the drilling activity, a 'window' must be excavated at or near the utility to visually monitor the potentially hazardous situation. A vacuum unit is required to remove the drilling fluid during this process and high pressure drilling fluid hazards

**Horizontal Directional Drilling (HDD) Jobsite Safety**

must be addressed. If a bore passes closely by a utility, it may be necessary to continuously monitor the separation after the drill head or reamer passes the 'window', as the drill string or product pipe may subsequently contact the utility during the completion of the installation. Communication is critical ingredient of any successful horizontal directional drilling project. It is imperative that the drill locator and the drill rig operator have an understanding of the job prior to commencement of the work. They should walk the planned bore path with the tracking equipment to evaluate any potential fields of electromagnetic (active) interference that may hinder the operation, and discuss the identified hazards. During the actual boring process, if abnormal readings are found with the tracking equipment, the contractor should stop, backup and verify previous readings prior to commencing the bore. This is critical; as deviation from the planned bore profile could result in an underground utility strike. Care must also be taken during the pullback to ensure that utilities are not damaged due to the upsizing by the enlarged back reamer and possible straightening of the bore during back reaming and product installation.

### **Traffic Control (Pedestrian and Vehicle)**

Necessary traffic control must be maintained throughout the project. Typically, mobilization, demobilization, material handling, and intermittent movement of mobile equipment require traffic control if the activity conflicts with vehicle or pedestrian traffic. Traffic control includes permits, planning, notification, flag persons, warning signs and barricades. The work area, particularly around the drill rig and entrance/exit pits, must also be secured to prevent unauthorized entry. Emergency vehicles and buses must have access during construction.

### **Safe Practices, Safety Equipment**

Safe practices must include identification of hazards, as well as isolation, control or removal of hazards. Personal protective equipment that is required on an HDD job-site is similar to that required on other construction job-sites. Examples include:

- Hard hat meeting OSHA criteria
- Safety glasses, goggles or face shields meeting OSHA criteria
- Hearing protection
- Highly visible reflective clothing
- Work boots
- Work gloves
- Any other safety equipment mandated by other rules or required by Owner or regulatory agency
- Dielectric boots and gloves
- Suitable communication devices

- Remote break out wrenches for working on the drill string
- If the drilling unit is equipped with an Electrical Strike Sensing System, its use should follow manufacturer’s recommendations. The system may include audible and visual warning alarms, grounding mats, and personal protective equipment. Electrical sensing stakes must be driven into the ground and the strike alert system tested prior to operation.

### **Drilling Precautions**

The following precautions should be observed during the drilling operation:

- If a hazardous situation is suspected, work should be stopped until an evaluation is made and appropriate corrective action taken.
- Potential “pinch points” on the drill rig and support equipment must be identified and avoided.
- Safe clearances (at least 900mm (3ft) or as specified by regulatory authorities) must be maintained between the bore and all utilities. The minimum clearance must take into consideration the final reamed diameter and the bend radius of the pilot bore.
- Workers must stay clear of the rotating drill string.
- The drill must not be operated when personnel are working on or near the drill string
- The drill must not be operated without positive communication with the drill locator or exit side personnel
- The manufacturer’s specified maximum torque and thrust pullback capacity of the drill pipe must not be exceeded
- Remote breakout wrenches must be used safely. Drilling machine torque or backhoes with wrenches should never be used to make or break tool joints.

### **Reaming and Installation Precautions**

The following precautions should be observed during reaming and product installation:

- Two-way radio communication must be maintained at all times between the entry and exit sides.
- The drill pipe must not be rotated until all personnel have been notified and acknowledgement has been made by all personnel.
- Workers must never step over rotating drill pipe and must maintain a safe distance when working near rotating drill pipes.
- When crossing existing underground utilities, the utility must be exposed at the crossing location and monitored during crossing.

### **Response to Events**

If an existing utility is struck during the boring operation, emergency procedure must be initiated to reduce the likelihood of human injury. Procedures to follow in the event of utility strikes are summarized below by type of utility.

## **Horizontal Directional Drilling (HDD) Jobsite Safety**

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### **Electrical Strike**

If an electrical strike occurs, workers should not move. The voltage difference between the equipment and the ground, or even between a person's feet may be sufficient to cause injury or death. Do not touch the machine, drill pipe, water system, mud-mixing system, or anything connected to the drill as these items may be highly charged. The drill operator should remain calm and reverse the direction of advance in attempt to break contact with the electrical line. The electrical utility company must be contacted immediately. The drill operator should follow the manufacturer's procedure to determine if the drill is electrically charged before attempting to dismount the drill.

### **Gas Strike**

If a gas line strike occurs, evacuate the area immediately. The drill operator should shut down all engines and under no circumstance should the operator attempt to reverse the bore to break contact as further movement may cause a spark. Emergency services and the gas utility company should be contacted immediately.

### **Fiber Optic Strike**

If a fiber-optic strike occurs, workers must not look into the cut ends of the cable which can cause severe eye damage. Drilling must stop immediately and the utility owner must be contacted.

### **Communication Line Strike**

If a communications line strike occurs, drilling must stop immediately and the utility company should be contacted.

### **Sanitary/Storm Sewer and Water Strike**

If a water or sewer line strike occurs, drilling should be stopped immediately and all bystanders should be warned that a strike has occurred and that they should stay away. As with any strike, the utility owner should be contacted.

### **Conclusion**

Hazards that are specific to HDD include the rotation drill string, making up and breaking out of tool joints, and unknown utility strike potential. However, the most common incidents and accidents on an HDD site are those that are common to other construction activities including slips, trips and falls, excavation cave-ins, pinched fingers and toes, vehicle accidents, and back injuries. The common hazards and hazards specific to HDD equipment and operations must be identified and isolated or removed to avoid incidents and accidents.

*Adapted from the "Horizontal Directional Drilling Good Practices Guidelines" copyright by HDD Consortium, May 2001. For more information on safety considerations in HDD, refer to specific equipment operation manuals and the Horizontal Directional Drilling Good Practices Guidelines, available in book and DVD in the company library. Also refer to The General Construction Safety Guidelines and OSHA Construction Safety Orders.*

### **Job-Specific Safety Precautions**

## **Heavy Equipment Operation**

1. No passengers are permitted on heavy equipment.
2. Keep windows and windshield clean.
3. Do not use heavy equipment if the horn or backup alarm do not sound.
4. Turn off the engine before leaving heavy equipment unattended.
5. Do not jump off of or onto any heavy equipment.
6. Keep heavy equipment in gear when going down grade. Do not use neutral.
7. Display the "Slow Moving Vehicle" sign when operating heavy equipment on roads.
8. Do not operate backhoes, power shovels and other heavy equipment within two (2) feet from the edge of an excavation.
9. Do not use a bucket or other attachments for a staging or temporary platform for workers.
10. Do not operate a backhoe over or across underground utilities that are marked by paint, flagged or staked.
11. Set swing brake of a backhoe bucket arm when moving the vehicle to and from the digging site.
12. Stay in the compartment during operation of heavy equipment. Do not reach in or attempt to operate controls from outside the piece of equipment.

### **Crane Safety**

1. Do not use load hooks that are cracked, bent or broken.
2. Do not use cranes that do not have their rated load capacity indicated on each side of the crane or on its load block.
3. Passengers are not permitted to ride inside the operator's cab of a truck crane.
4. Keep crane windows clean. Do not use a crane if its windows are broken.
5. Do not exceed the rated load capacity as specified by the manufacturer.
6. Do not operate a crane on soft ground without using cribbing and mats.
7. Fully extend outriggers before attempting a lift.
8. Stay outside the barricades of the posted swing radius.
9. Do not perform any crane refits or modifications without the manufacturer's approval.
10. Do not leave the crane unattended with a hoisted load.
11. Do not hoist loads over people.
12. Do not drive on the road shoulders.
13. Wear a high visibility vest when working as a signalman.
14. Only follow the signals of the person designated to give you signals when operating a crane.
15. Replace the belts, gears or rotating shaft guards after servicing a crane; do not use the crane if guards are missing from these areas.

### **Sling Safety**

1. Do not use chain slings if links are cracked, twisted, stretched or bent.
2. Do not shorten slings by using make-shift devices such as knots or bolts.
3. Do not use a kinked chain.
4. Protect slings from the sharp edges of their loads by placing pads over the sharp edges of the items that have been loaded.
5. Wear work gloves when handling rough, sharp-edged or abrasive chains, cables, ropes or slings.
6. Do not alter or remove the safety latch on hooks. Do not use a hook that does not have a safety latch, or if the safety latch is bent.
7. Do not place your hands between the sling and its load when the sling is being tightened around the load.
8. Lift the load from the center of hooks, not from the point.

### **Labor Personnel Safety**

1. Do not start work until barricades, barrier logs, fill or other protection have been installed to isolate the work area from local traffic.
2. Reflective warning vests must be worn by traffic flagmen who are assigned to controlling traffic.
3. Do not approach any heavy equipment until the operator has seen you and has signaled to you that it is safe to approach.
4. Walk around or step over holes, rocks, roots, materials or equipment in your pathway.
5. Do not work outdoors during lightning storms.
6. Drink plenty of clear liquids during your breaks.
7. Take breaks in shaded areas.

### **Scaffold Safety**

1. Follow the manufacturer's instructions when erecting the scaffold.
2. Do not work on scaffolds outside during stormy or windy weather.
3. Do not climb on scaffolds that wobble or lean to one side.
4. Initially inspect the scaffold prior to mounting it. Do not use a scaffold if any pulley, block, hook or fitting is visibly worn, cracked, rusted or otherwise damaged. Do not use a scaffold if any rope is frayed, torn or visibly damaged.
5. Do not use any scaffold tagged "Out of Service."
6. Do not use unstable objects such as barrels, boxes, loose brick or concrete blocks to support scaffolds or planks.
7. Do not work on platforms or scaffolds unless they are fully planked.
8. Do not use a scaffold unless guardrails and all flooring are in place.
9. Level the scaffold after each move. Do not extend adjusting leg screws more than 12 inches.
10. Do not walk or work beneath a scaffold unless a wire mesh has been installed between the midrail and the toeboard or planking.
11. Use your safety belts and lanyards when working on scaffolding at a height of 10 feet or more above ground level. Attach the lanyard to a secure member of the scaffold.
12. Do not climb the cross braces for access to the scaffold. Use the ladder.
13. Do not jump from, to, or between scaffolding.
14. Do not slide down cables, ropes or guys used for bracing.
15. Keep both feet on the decking. Do not sit or climb on the guardrails.
16. Do not lean out from the scaffold. Do not rock the scaffold.
17. Keep the scaffold free of scraps, loose tools, tangled lines and other obstructions.
18. Do not throw anything "overboard" unless a spotter is available. Use the debris chutes or lower things by hoist or by hand.
19. Do not move a mobile scaffold if anyone is on the scaffold.
20. Chock the wheels of the rolling scaffold, using the wheel blocks, and also lock the wheels by using your foot to depress the wheel-lock, before using the scaffold.

### **Electrical – Hot Line Safety**

1. Clean all protective line equipment after each use, prior to storage.
2. Wear rubber gloves or use hot sticks when removing tree branches, limbs, or similar objects from contact with high voltage lines, panels or equipment.
3. Do not wear rubber protective gloves while climbing or descending a pole.
4. Wear 100% cotton or flame resistant shirts or jumpers (with sleeves rolled down) and protective hats when working on or near live parts, lines, and panels or when climbing poles.

## Job-Specific Safety Precautions

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5. Wear body belts with straps or lanyards when working at an elevated position (poles, towers, etc.).
6. Visually inspect body belts and straps before use for defects, wear, and damage.
7. When working with lines of 600 volts or more:
  - Wear rubber gloves or use hot sticks when placing protective equipment around energized voltage conductors.
  - Do not work on a line that is removed from service until the line is cleared, tagged, tested, and grounded.
  - Treat bare wire communication conductors on structures as energized lines unless they are protected by insulated conductors.
8. Treat bare wire communication conductors on power poles and structures as energized lines (with voltages in excess of 600 volts) unless the conductors are protected by insulating materials.
9. Do not remove any ground until all employees are clear of the temporary grounded lines or equipment.
10. After a capacitor has been disconnected from its source of supply, wait five minutes before short-circuiting and grounding it.
11. Do not contact the terminals, jumpers or line wires connected directly to capacitors until the capacitors have been short-circuited and/or grounded.
12. Visually inspect and wipe down all hot line tools each day before use.
13. Do not wear rubber gloves with protectors while using hot line tools.
14. Do not use defective hot line tools. Mark them as defective and turn them in for repair or replacement.

### **Hazardous Materials**

1. Follow the instructions on the label and in the corresponding Safety Data Sheet (SDS) for each chemical product you will be using in your workplace.
2. Do not use protective clothing or equipment that has split seams, pin holes, cuts, tears, or other visible signs of damage.
3. Each time you use your gloves, wash them, before removing the gloves, using cold tap water and normal hand washing motion. Always wash your hands after removing the gloves.
4. Do not use chemicals from unlabeled containers or unmarked cylinders.
5. Always use chemical goggles and a face shield before handling chemicals labeled "Corrosive" or "Caustic."
6. Do not store chemical containers labeled "Oxidizer" with containers labeled "Corrosive" or "Caustic."
7. Do not smoke while handling chemicals labeled "Flammable."

### **Machine Safety**

1. Do not remove, alter or bypass any safety guards or devices when operating mechanical equipment such as mechanical power presses, press brakes, metal working lathes, radial arm saws, drills, horizontal mill, punch press, or when bending or forming materials.
2. Replace guards, before starting the machine, after making adjustments or repairing the machine.
3. Do not try to stop a workpiece as it goes through any machine. If the machine becomes jammed, disconnect the power before clearing the jam.
4. Do not wear loose clothing, jewelry or ties in the machine shop.
5. Read and obey safety warnings posted on or near any machinery.
6. Long hair must be contained under a hat or hair net, regardless of gender.

## Job-Specific Safety Precautions

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## Power Saws

1. Wear the prescribed personal protective equipment such as goggles, gloves, dust masks and hearing protection when operating the power saw.
2. Turn the saw power switch "Off" before making measurements, adjustments or repairs.
3. Keep your hands away from the exposed blade.
4. Operate the saw at full cutting speed, with a sharp blade, to prevent kickbacks.
5. If the saw becomes jammed, turn the power switch of the saw to "Off" before pulling out the incomplete cut.
6. Do not alter the anti-kickback device or blade guard.

## Abrasive Cut-Off Saws and Chop Saws

1. Do not use the saw if the lower portion of the blade hood is not adjusting itself to the thickness of the material being cut as the blade passes through the material.
2. Allow the saw to return to its stored position before removing the cut material from the table.
3. Lay the material squarely and solidly down before sawing it.
4. Use a clamp to secure cylindrical materials to the saw "table" before cutting.
5. Do not use the abrasive cut off saw for grinding or sharpening any tool or material.

## Drill Press

1. Replace the belt and pulley guard before starting the press and after making adjustments or repairs to the press.
2. Make sure the press table is locked into place and the depth adjustment is set before turning on the power.
3. Remove the chuck key before turning on the power.
4. Clamp small pieces of stock that are to be drilled in the drill vise or to the work bench.
5. Do not wear rings, wristwatches or gloves when working with the drill press.
6. Turn off the power and wait until the machine has come to a complete stop before reaching for the piece of stock.
7. Keep the drill press and the area around the drill press clear of metal cuttings and lubricants.
8. When adjusting the chuck size, do not turn on the power to the drill press while holding the chuck with your hand.

## Grinders & Grinding Wheels

1. Prior to installing a new grinding wheel, inspect the wheel for cracks or other visible damage by conducting a "ring test." Tap the wheel gently with a plastic screwdriver handle to detect cracks that are not visible. If the wheel has a dead sound rather than a ring sound, do not use the wheel.
2. Do not use a grinding wheel that has chips, cracks or grooves.
3. Do not use the grinding wheel if it wobbles. Tag it "Out of Service."
4. Adjust the tongue guard so that it is no more than 1/4 inch from the grinding wheel.
5. Adjust the tool rest so that it is no more than 1/8 inch from the grinding wheel.
6. Do not use a bench grinder if it is not firmly anchored to the work bench or other secure platform.
7. Do not install a grinding wheel whose labeled RPM is lower than the rated speed of the grinder.
8. Stand to one side of the plane of a rotating grinding wheel during the first few seconds of operation.
9. Grind on the side of the wheel only when it is made for side grinding.
10. Turn the grinder "off" when you have finished working with it and remain at the machine until it has completely stopped turning.

## Job-Specific Safety Precautions

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## **Portable Grinders**

1. Do not use a portable hand held grinder with a wheel diameter larger than 2" unless the grinder has a positive action switch to ensure the switch can not be locked in the on position.
2. Do not use a portable grinder if the grinding wheel guard is missing.
3. Do not clamp a portable grinder in a vice to use it as a bench grinder.

## **Pneumatic & Hydraulic Tools**

1. Do not point a charged compressed air hose at bystanders or use it to clean your clothing.
2. Lock and/or tag tools "Out of Service" to prevent usage of the defective or damaged tool.
3. Do not use tools that have handles with burrs or cracks.
4. Do not use compressors if their belt guards are missing. Replace the belt guards before using the compressor.
5. Turn the power switch of the tool to "Off" and let it come to a complete stop before leaving it unattended.
6. Disconnect the tool from the air line before making any adjustments or repairs to the tool.

## **Electrical Powered Tools**

1. Do not use power equipment or tools on which you have not been trained.
2. Keep power cords away from the path of drills, saws, vacuum cleaners, floor polishers, mowers, knives, and grinders.
3. Do not use cords that have splices, exposed wires, or cracked or frayed ends.
4. Do not carry plugged in equipment or tools with your finger on the switch.
5. Do not carry equipment or tools by the cord.
6. Disconnect the tool from the outlet by pulling on the plug, not the cord.
7. Turn the tool off before plugging or unplugging it.
8. Do not leave tools that are "On" unattended.
9. Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.
10. Do not operate spark inducing tools such as grinders near containers labeled "Flammable."
11. Turn off the electrical tool and unplug it from the outlet before attempting repairs or service work. Tag the tool "Out of Service."
12. Do not use extension cords or other three pronged power cords that have a missing prong.
13. Do not use an adapter such as a cheater plug that eliminates the ground.
14. Do not run extension cords through doorways, through holes in ceilings, walls or floors.
15. Do not drive over, drag, step on or place objects on a cord.
16. Do not use a power hand tool while wearing wet cotton gloves or wet leather gloves.
17. Never operate electrical equipment barefooted. Wear rubber-soled or insulated work boots.
18. Do not operate a power hand tool or portable appliance while holding a part of the metal casing or while holding the extension cord in your hand. Hold all portable power tools by the plastic hand grips or other nonconductive areas designed for gripping purposes.

## **Hand Tool Safety**

1. Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
2. Tag worn, damaged or defective tools "Out of Service" and do not use them.
3. Do not use a tool if the handle surface has splinters, burrs, cracks or splits.

## **Job-Specific Safety Precautions**

4. Do not use impact tools such as hammers, chisels, punches or steel stakes that have mushroomed heads.
5. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
6. Do not carry sharp or pointed hand tools such as screwdrivers, scribes, chisels or files in your pocket unless the tool or your pocket is sheathed.
7. Do not perform "make-shift" repairs to tools.
8. Do not throw tools from one location to another or from one employee to another.
9. Transport hand tools only in tool boxes or tool belts. Do not carry tools in your hand or clothing when climbing.

## **Forklift Safety**

1. Only employer authorized personnel may operate forklifts.
2. Do not exceed the forklift lift capacity (refer to the lift capacity plate on the forklift).
3. Follow the manufacturer's guidelines concerning changes in the lift capacity before adding an attachment to a forklift.
4. Lift the load an inch or two to test for stability: If the rear wheels are not in firm contact with the floor, take a lighter load or use a forklift with a higher lift capacity.
5. Do not raise or lower a load while you are in route. Wait until you are in the loading area and have stopped before raising or lowering the load.
6. After picking up a load, adjust the forks so that the load is tilted slightly backward for added stability.
7. Drive with the load at a ground clearance height of 4-6 inches at the tips and 2 inches at the heels in order to clear most uneven surfaces and debris.
8. Drive at a walking pace and apply brakes slowly to stop when driving on slippery surfaces such as icy or wet floors.
9. Approach railroad tracks at a 45 degree angle.
10. Do not drive over objects in your pathway.
11. Do not drive into an area with a ceiling height that is lower than the height of the mast or overhead guard.
12. Steer wide when making turns.
13. Do not drive up to anyone standing or working in front of a fixed object such as a wall.
14. Do not drive along the edge of an unguarded elevated surface such as a loading dock or staging platform.
15. Obey all traffic rules and signs.
16. Sound the horn when approaching blind corners, doorways or aisles to alert other operators and pedestrians.
17. Do not exceed a working speed of five miles per hour and slow down in congested areas.
18. Stay a minimum distance of three fork truck lengths from other operating mobile equipment.
19. Drive in reverse and use a signal person when your vision is blocked by the load.
20. Look in the direction that you are driving; proceed when you have a clear path.
21. Do not use bare forks as a man-lift platform.
22. Do not load pallets of wood that are not banded on to the forklift.
23. Do not drive the forklift while people are on an attached aerial lift platform.
24. Drive loaded forklifts forward up ramps and in reverse when driving down a ramp.
25. Drive unloaded forklifts in reverse when going up a ramp & forward when going down a ramp.
26. Raise the forks an additional two inches to avoid hitting or scraping the ramp surface as you approach the ramp.
27. Do not attempt to turn around on a ramp.
28. Do not use "Reverse" to brake.

## **Job-Specific Safety Precautions**

29. Lower the forks completely, turn off the engine and set the parking brake before leaving your forklift.

### **Compressed Gas Cylinders – Storage & Handling**

1. Do not handle oxygen cylinders if your gloves are greasy or oily.
2. Store all cylinders in the upright position.
3. Place valve protection caps on gas cylinders that are in storage or not in use.
4. Do not lift cylinders by the valve protection cap.
5. Do not store compressed gas cylinders in areas where they can come in contact with chemicals labeled "Corrosive."
6. Do not place cylinders against electrical panels or live electrical cords where the cylinder can become part of the circuit.
7. Do not store oxygen cylinders near fuel gas cylinders such as propane or acetylene, or near combustible material such as oil or grease.
8. If a cylinder is leaking around a valve or a fuse plug, move it to an outside area away from where work is performed and tag it to indicate the defect.

### **Hand Truck Safety**

1. When loading hand trucks, keep your feet clear of the wheels.
2. Do not exceed the manufacturer's load rated capacity. Read the capacity plate on the hand truck if you are unsure.
3. Place the load so that it will not slip, shift or fall. Use the straps, if they are provided, to secure the load.
4. For extremely bulky or pressurized items, such as gas cylinders, strap or chain the items to the hand truck.
5. Tip the load slightly forward so that the tongue of the hand truck goes under the load.
6. Push the tongue of the hand truck all the way under the load that is to be moved.
7. Keep the center of gravity of the load as low as possible by placing heavier objects below the lighter objects.
8. Push the load so that the weight will be carried by the axle and not the handles.
9. If your view is obstructed, ask a spotter to assist in guiding the load.
10. Do not walk backward with the hand truck, unless going up ramps.
11. When going down an incline, keep the hand truck in front of you so that it can be controlled at all times.
12. Move hand trucks at a walking pace.
13. Store hand trucks with the tongue under a pallet, shelf, or table.

### **Welding/Cutting/Brazing**

1. Obey all signs posted in the welding area.
2. Do not leave oily rags, paper such as blueprints or other combustible materials in the welding, cutting or brazing area.
3. Do not perform "hot work," such as welding, metal grinding or other spark producing operations, within 50 feet of containers labeled "Flammable" or "Combustible."
4. Use the red hose for gas fuel and the green hose for oxygen.
5. Do not use worn, burned or cracked hoses.
6. Do not use oil, grease or other lubricants on the regulator.
7. "Blow Out" hoses before attaching the torch.

### **Job-Specific Safety Precautions**

8. Ignite torches with friction lighters only. Do not use a cigarette lighter.
9. Do not change electrodes with bare hands; use dry rubber gloves.
10. Bleed oxygen and fuel lines at the end of the work-shift.
11. Do not wear contact lenses when welding.
12. When welding, wear a welding helmet with filter plates and lenses, welding gloves, a long sleeve shirt, long pants, and an apron.
13. Wear clothing made of cotton, wool, or non-synthetic fibers. Wear long sleeve shirts, long pants, boots, and gloves.
14. Use the welding screen to shield other employees from flying slag and intense light.
15. Before welding place the floor fan behind you to keep welding fumes away from your face.
16. Do not use a torch on any container that is labeled "Flammable" or "Combustible."

## **Electrical Arc Welding**

1. Obey all signs posted in the welding area.
2. Use the welding screen to shield other employees from flying slag and intense light.
3. Wear a welding helmet with filter plates and lenses, welding gloves, a long sleeve shirt and long pants when welding.
4. Do not perform welding tasks while wearing wet cotton gloves or wet leather gloves.
5. Do not change electrodes with bare hands; use dry welder's gloves.
6. Do not use the welding apparatus if the power cord is cut, frayed, split or otherwise visibly damaged or modified.

## **Spray Painting**

1. Store rags that have oil or paint on them in closed metal containers labeled "oily rags."
2. Press the pressure relief valve on painting canisters and painting guns prior to disconnecting them.
3. Do not eat, drink, smoke or apply cosmetics where spray painting is taking place.
4. Do not operate spark inducing tools such as grinders, drills or saws near containers labeled "Flammable " or in an explosive atmosphere such as paint spray booths or rooms.
5. Perform all spray painting operations in the spray booth or room.
6. Do not point the spray gun toward any part of your body or at anyone else.
7. Turn the control switch to the "on" position to operate the mechanical ventilation system before and during all spraying operations.

## **Heat-Related Illnesses**

1. Wear loose, light colored clothing and a hat.
2. Adapt to working in hot conditions gradually, avoid over-exerting yourself during peak temperature periods.
3. Drink water frequently—at least eight ounces every 20 to 30 minutes. Stay away from liquids containing caffeine, as they tend to increase urination, which causes rapid depletion of body liquids.
4. Watch for the following signs and symptoms of heat-related illnesses:
  - a. Heat Cramps – severe muscle spasms in the back, stomach, arms, and legs, which are attributed to the loss of body salt and water during periods of heavy perspiration.
  - b. Heat Exhaustion – heavy sweating, cool or pale skin, nausea, headache, weakness, vomiting, and fast pulse.
  - c. Heat Stroke – high body temperature, minimal sweating, red and dry skin, rapid breathing and pulse, headache, nausea, vomiting, diarrhea, seizures, confusion or unconsciousness.
5. Treat heat illness as soon as possible by doing the following:

## **Job-Specific Safety Precautions**

- a. Heat Cramps – move to a cooler area and drink approximately six ounces of water every 15 minutes. Follow-up with a medical examination.
- b. Heat Exhaustion – move to a cooler area and lie down with your legs slightly elevated. Cool your body by fanning and applying cool, wet towels and drink approximately six ounces of water every 15 minutes. Follow-up with a medical examination.
- c. Heat Stroke – Call 9-1-1 immediately. Move to a cooler area, remove your outer clothing, immerse yourself in cool water or apply cool, wet towels or cloths to the body. Do NOT drink liquid, and wait for emergency personnel to arrive.

## **Cold Weather Illnesses**

1. Exposed skin freezes within one minute at -20°F when the wind speed is five miles per hour (mph), and will freeze at 10°F if the wind speed is 20 mph. When skin or clothing are wet, injury or illness can occur in temperatures above 10° F, and even above freezing (32° F). When the body is unable to warm itself, hypothermia and frostbite can set in, resulting in permanent tissue damage and even death.
2. Watch for the following signs of cold-related illnesses:
  - a. Uncontrollable shivering
  - b. Slurred speech
  - c. Clumsy movements
  - d. Fatigue
  - e. Confused behavior
3. Layer clothing to keep warm enough to be safe, but cool enough to avoid perspiring excessively.
  - a. Inner layer – synthetic weave to keep perspiration away from the body.
  - b. Middle layer – wool or synthetic fabric to absorb sweat and retain body heat.
  - c. Outer layer – material designed to break the wind and allow for ventilation.
4. Wear a hat to avoid losing almost 40 percent of your body heat.
5. Place heat packets in gloves, vests, boots and hats to add heat to the body.
6. Watch out for the effects of cold temperatures on common body functions such as:
  - a. Reduced dexterity and hand usage
  - b. Cold tool handles reducing your grip force
  - c. The skin's reduced ability to feel pain in cold temperatures
  - d. Reduced muscle power and time to exhaustion

## Substance Abuse Policy

Employees are a most valued part of L & M Underground, Inc. (“the Employer”). Their health and safety are serious Employer concerns. Drug use and alcohol misuse may pose a serious threat to employee health and safety. It is, therefore, the policy of the Employer to prevent substance use or abuse from having an adverse effect on our employees.

The Employer maintains that the work environment is safer and more productive without the presence of illicit or inappropriate drugs or alcohol in the body or on company property in company vehicles or any of its work sites. Furthermore, all employees have a right to work in a drug-free environment and to work with individuals free from the effects of prohibited substances. Employees who use or abuse prohibited substances are a danger to themselves, their co-workers, the public and the Employer’s assets. The adverse impact of substance abuse by safety sensitive workers has been recognized by the federal government.

The Federal Department of Transportation (“DOT”) and many states have issued regulations which require the Employer to implement a controlled substance and alcohol testing program. L & M Underground, Inc. will comply with these regulations and is committed to maintaining a drug-free workplace and therefore has adopted the following policy.

## L & M Underground, Inc

### Statement of Policy on Substance Abuse

**It is the policy of L & M Underground, Inc. to insure a safe, healthy and efficient work place. Therefore, employee compliance with the following substance abuse policy is mandatory and is a condition of employment with L & M Underground, Inc.**

#### **Prohibited Use**

Employees shall not bring, consume or otherwise use alcohol or a ***Schedule 1 Drug As Defined By The Schedule Of Controlled Substances*** as published by the ***US Drug Enforcement Agency***; or any other substance such as amphetamine, narcotic or any other habit forming drug except as prescribed by a licensed physician.

Use of prescription drugs or “*Over-The-Counter*” pharmaceuticals must be reported to your supervisor or prior to reporting for work.

Schedule of drugs shall include but is not limited to the following; opiates, opium, derivatives, hallucinogenic substances, stimulants and depressants.

Employees **shall not** consume alcohol while on duty or 4 hours prior to reporting for duty. They are not allowed to report to work with a blood alcohol level of .04 or above. Employees shall not consume Schedule 1 drugs either while on duty or off duty.

## Substance Abuse Policy

Employees who witness consumption of alcohol or drugs in the work areas or who suspect the impairment of another employee should report this information to their supervisor immediately.

Impaired employees place themselves and those around them at risk, particularly when performing safety sensitive duties such as driving, operating equipment, working in roadways or jobsites where equipment is being moved or used and digging around utilities.

### **Impairment Prohibited**

Employees **shall not** report for work while impaired by alcohol, controlled substances or, while under the influence of a physicians prescribed drug or over the counter pharmaceutical that would impair motor senses; sense of sight; hearing; balance; reaction time; reflex; or judgment, where senses actually may be or may assumed to be affected.

### **Possession Prohibited**

Employees **SHALL NOT** possess any quantity of alcohol or controlled substance as described herein while at the work place or on company property. The work place is defined as any location to which you are dispatched or assigned to engage in work or other company matters. The workplace includes all company vehicles and storage yards. Possess means to have under your control, access, personal vehicle or any area entrusted to your employment or control.

### **Employee Substance Screening**

To ensure strict compliance with the L & M Underground, Inc. SUBSTANCE ABUSE POLICY, both existing and new applicants or hires are subject to alcohol and/ or substance screening, under the circumstances described below.

Your signature on the acknowledgment at the end of this section confirms your agreement with the L & M Underground, Inc. Substance Abuse Policy and Employee Screening Program and indicates your consent to comply with requests for such screening as may be determined necessary by the Company. You are advised that is your right to refuse participation in the L & M Underground, Inc. policy and thereby terminate your employment relationship with the company. Such action shall be determined as a resignation from employment with the attendant consequences.

#### **1. APPLICANTS:**

- Prior to receiving a position with L & M Underground, Inc., all applicants are subject to a substance screening.

### 2. EXISTING EMPLOYEES:

- The screening of existing employees will be in accordance with the following circumstances:

a) **Reasonable Cause:** When there exists reasonable evidence that an employee has reported to work or is working impaired as determined by the judgment of a supervisor. Refusal or failure to submit or report to such a screening shall be considered as a positive test result and be addressed with the attendant consequences.

b) **Annual Testing:** Employees may be required to submit to random annual testing. Refusal or failure to submit or report to such a screening shall be considered as a positive test result and be addressed with the attendant consequences.

c) **Post Accident Testing:** Following an accident or incident on the job or in the work place, an Employee may be required to submit to a substance screening. Refusal or failure to submit or report to such a screening shall be considered as a positive test result and be addressed with the attendant consequences.

d) **Random Testing:** As determined by L & M Underground, Inc., random screenings may be requested to ensure compliance. Refusal or failure to submit or report to such a screening shall be considered as a positive test result and be addressed with the attendant consequences. **NOTE: Random testing may be determined by lot, or as performed by a third party safety & health or medical administrator.**

e) **Contract/Project specified testing:** Certain projects or contracts may require additional **testing for employees working on those projects. For example, all employees** working on Black & Veatch/Overland Contracting projects are subject to pre-employment, post accident, reasonable suspicion, & 10% monthly random drug testing while on the project.

DOT Test results will be conducted following the guidelines established in TITLE 49: TRANSPORTATION PART 40 - PROCEDURES FOR TRANSPORTATION WORKPLACE DRUG AND ALCOHOL TESTING PROGRAMS attached separately. In addition to alcohol, the following substances will be tested for:

- (a) Marijuana metabolites.
- (b) Cocaine metabolites.
- (c) Amphetamines.
- (d) Opiate metabolites.
- (e) Phencyclidine (PCP).

Test results will be reviewed to determine whether there is any indication of alcohol or substance present. The results are confidential. The L & M Underground, Inc., Human Resource Administrator, or designated third party medical review officer will be the sole custodians of individual test results. Based on the findings, an employment determination will be made. A violation of this policy, including a refusal to submit testing, will be grounds for termination.

**L & M Underground, Inc.**

**ACKNOWLEDGMENT**

**SUBSTANCE ABUSE PROGRAM**

**I Have Received A Copy Of And Personally Reviewed The L & M Underground, Inc. Substance Abuse And The Substance Abuse Program. I Hereby Agree To And Comply With The Terms Of My Employment And The Conditions As Therein Described. I Understand My Compliance Is A Condition Of My Employment With L & M Underground, Inc.**

**Name:**

**Date:**     /     /

\_\_\_\_\_

**Signature:**

## Additional Safety Guidelines

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In addition to the safety policies outlined in this manual, L & M Underground, Inc. requires all employees to be familiar with and adhere to the following safety guides:

National Utility Contractors Association (NUCA) Safety Manual. This manual, while covering many of the same policies included in this document, goes into further explanation and provides a more thorough understanding of the following subjects:

- Accident Investigation
- Fleet Safety
- Hazard Communications
- OSHA Education, Training and Recordkeeping
- Trench Safety
- Confined Space Entry
- Respiratory Protection
- Electrical
- Work Zones
- Noise in Construction
- Vacuum Excavation and Equipment
- Damage Prevention

NUCA HDD Best Practices

UNCC Excavator Handbook

These manuals are incorporated into our new hire orientation and are available for review at our warehouse.

# Appendix A – Silica Safety Manual

## Purpose

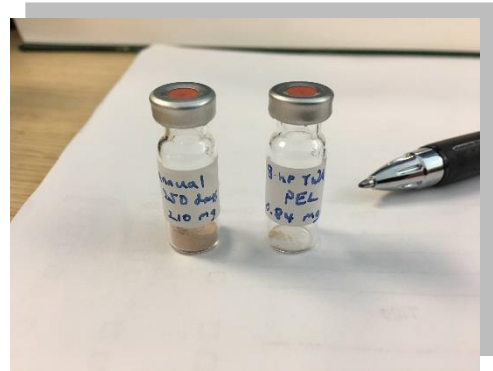
L & M Underground is committed to a safe and healthy workplace for its employees. The purpose of this program is to identify respirable crystalline silica hazards and provide tools, equipment, PPE and policies to protect employees from silica hazards. This program applies to work areas and tasks with an expected silica level that exceeds 25 µg/m<sup>3</sup> of air calculated as an 8-hour time weighted average.

## Program Responsibilities

### Management

Management has the following responsibilities:

1. To comply with OSHA standards for silica and other relevant regulations.
2. To identify tasks and work areas that have silica hazards.
3. To establish a written silica exposure control program.
4. To keep employee exposure to respirable crystalline silica below the permissible exposure level.
5. To conduct silica exposure monitoring for all jobs, procedures, or tasks that may involve silica above the required action level.
6. To inform employees of the results of silica monitoring and provide the opportunity to observe exposure assessments.
7. Make available a medical surveillance program for affected employees.
8. To select materials, equipment, and procedures that minimize or eliminate silica hazards.
9. To designate a Silica Safety Coordinator, who has the responsibility for administration of this program.
10. To provide all required personal protective equipment to employees.
11. To provide training on the hazards of silica and working safely in environments with silica exposure.



The right bottle is the amount of silica required to reach the PEL for 8 hours. The left is the amount required to reach the PEL over a year.

### Silica Safety Coordinator

The company Silica Safety Administrator is **Mike Slater**. The Silica Safety Coordinator has the following responsibilities:

1. To supervise and administrate the company silica safety program.
2. To maintain the company written silica exposure control program.
3. To develop a list of job classifications that involve silica exposure.
4. To arrange for appropriate monitoring of silica levels.
5. To assist the company in developing policies and procedures that describe appropriate work practices for employees with silica exposure.

6. To manage the company medical surveillance program.
7. To assist supervisors in selecting appropriate personal protective equipment.
8. To coordinate or provide training for employees.
9. To designate silica safety competent persons.
10. To maintain all required records for the silica safety program.
11. To create and maintain silica safety exposure control programs, and to review them annually.
12. To conduct periodic audits to ensure the company is operating in accordance with policy.

<b>Silica Safety Coordinator</b>	
Position	Safety
Name	Jim Dolson
Phone Number	303-304-7714
Email	Jim.dolson@lmunderground.net
Address	7529 S Storm Mountain, Littleton, CO 80127

### Silica Safety Competent Person

Each work site will have at least one designated competent person for silica safety. This person will be capable of identifying existing and predictable silica hazards and have the authority to take prompt corrective action to eliminate them. Silica safety competent persons have the following responsibilities:

1. To ensure that employees are following the work practices required for working with silica hazards.
2. To conduct frequent and regular inspections of job sites, materials and equipment.
3. To take corrective action to eliminate existing and potential lead hazards.

### Supervisors

Supervisors have the following responsibilities:

1. To ensure that employees are working safely, and in accordance with the silica safety program and applicable regulations.
2. To ensure that a determination of silica levels has been completed prior to starting work, or that employees are appropriately protected while determinations are taking place.
3. To assign work with silica hazards to authorized employees.
4. To make sure that employees with potential silica exposure receive training and required personal protective equipment before starting work.
5. To ensure that employees use all required personal protective equipment.
6. To inform the silica safety coordinator when there is a possibility of a change in the levels of silica exposure, or a change to work processes that may affect exposure levels.
7. To provide feedback on the company silica safety program.
8. To facilitate communication between employees and management on safety issues.

### Employees

Employees have the following responsibilities:

1. To work in accordance with the requirements of this program.
2. To use all required personal protective equipment.
3. To immediately report all safety issues and incidents to a supervisor.
4. To complete all required training before starting work.

## Exposure Assessment

The company will assess the silica exposure for each employee. This may be accomplished with performance data or scheduled monitoring in accordance with OSHA requirements. Exposure assessment data will be kept with this program.

### Job Classifications with Silica Exposure

Job Classifications with Exposure Greater Than 25 $\mu/m_3$

### Informing Employees

Employees will be notified in writing of the results of silica exposure monitoring. This will be done within five days of receiving the information.

### Periodic Monitoring

Exposure monitoring will be repeated in accordance with the following requirements:

1. If exposure levels are at or above the action level but below the permissible exposure limit the company will repeat monitoring at least every six months.
2. If exposure levels are at or above the permissible exposure limit the company will perform monitoring at least quarterly.
3. The company will perform additional monitoring whenever there has been a production, process, control or personnel change which may result in new or additional exposure to silica, or whenever the company has any other reason to suspect a change which may result in new or additional exposures.

## Housekeeping

The accumulation of silica dust leads to higher levels of exposure. Employees are required to clean up at the end of every shift, and whenever there is a noticeable accumulation of dust. Employees must adhere to the following housekeeping practices:

1. Vacuums with HEPA filters are the preferred method of cleaning.
2. Wet seeping will be used if HEPA vacuums are not available or it is not feasible.
3. Dry sweeping of silica contaminated dust is not authorized unless wet sweeping or HEPA vacuums are not feasible.
4. Never clean surfaces with compressed air. It can spread contamination.

## Silica Exposure Control Plans

Silica Exposure Control Plans are required for any work area or job site that exceeds the action level for silica. A Silica Exposure Control Plan will include:

1. A description of tasks that involve exposure to respirable silica.
2. Engineering controls, work practices, and respiratory protection used to limit employee exposure.
3. A description of housekeeping measures used to limit exposure.
4. A description of methods used to restrict access to work areas with silica hazards.

Silica exposure control plans will be reviewed and update at least annually. The plans are available to any employee upon request.

### Exposure Controls

The company will determine appropriate engineering controls, work practices, and respiratory protection for each work task. The exposure controls will either be taken from Table 1 of 1926.1153 or be specially designed by the employer to maintain exposure below the PEL. Exposure controls and methods will be listed on the exposure control plan and covered as part of employee training.

## Medical Surveillance

All employees required to use respirators by this program 30 days or more a year have the option to undergo medical surveillance. This is provided at no cost to the employee.

### Medical Facility

The company has selected a medical clinic to run the silica safety medical surveillance program.

Medical Clinic Contact Information	
Name	Concentra
Contact Person	
Phone Number	303-292-2273
Fax	303-296-4138
Address	420 e. 58 <sup>th</sup> Ave, Denver

## Training

All employees covered by this standard will receive training on the hazards of respirable crystalline silica, and the procedures and equipment required for protection. This training will include:

1. The health hazards associated with silica exposure, including:
  - a. Cancer
  - b. Lung effects
  - c. Immune system effects
  - d. Kidney effects.
2. Specific tasks in the workplace that could result in silica exposure.
3. Specific measures implemented to protect employees, which may include:
  - a. Engineering controls
  - b. Work practices
  - c. Respirators.
4. The OSHA requirements for respirable crystalline silica.
5. The identity of the competent person in charge of the silica exposure control plan.
6. The purpose and description of the medical surveillance program.

## Program Review and Audits

### Audits

The silica safety coordinator will perform workplace audits at least **(enter frequency)**. Employees who are not following the requirements of this program will be assigned refresher training. These audits will include:

1. Verification that all employees in silica areas have received proper training.
2. Checks to make sure that employees are following the work procedures necessary for silica safety.
3. Checks to make sure that employees are properly using their assigned PPE.
4. Verification that control measures used to manage silica exposure are working properly.
5. A review of the medical surveillance records to ensure all employees are up to date.
6. Checks to make sure that silica exposure control plans are in place and up to date.

### Program Review

An accurate and up to date silica safety program is essential for success. This program, and associated silica exposure control plans, will be reviewed at least yearly. The company will solicit suggestions from employees on ways to improve compliance. Employees who have suggestions on how to improve safety in the workplace should talk to their supervisor. Supervisors will document these suggestions and submit them to the silica safety coordinator. Employees may also contact the silica safety coordinator directly.

# Silica Exposure Control Plan Template

## Silica Exposure Control Plan

Exposure Plan Created By		Date	
Job Site or Work Area			
Location / Address			
Type of Work			
Competent Person(s)			
<b>Description of Work</b>			

Work Tasks Controls Description	
Job Task	
Materials Involved	
Work Practices	
Respiratory Protection	
Other PPE	

Work Tasks Controls Description	
Job Task	
Materials Involved	

Engineering Controls	
Work Practices	
Respiratory Protection	
Other PPE	

<b>Housekeeping</b>	
Controls	

<b>Restricted Work Areas</b>	
The following work areas are restricted to authorized employees only while silica emitting operations are underway.	
Controls	

## Employee Acknowledgement Form

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L & M Underground, Inc. is firmly committed to your safety. We will do everything possible to prevent workplace accidents and are committed to providing a safe working environment for you and all employees. We value you not only as an employee but also as a human being critical to the success of your family, the local community, and L & M Underground, Inc.. You are encouraged to report any unsafe work practices or safety hazards encountered on the job. All accidents/incidents (no matter how slight) are to be immediately reported to the supervisor on duty.

A key factor in implementing this policy will be the strict compliance to all applicable federal, state, local, and L & M Underground, Inc. policies and procedures. Failure to comply with these policies may result in disciplinary actions. Respecting this, L & M Underground, Inc. will make every reasonable effort to provide a safe and healthful workplace that is free from any recognized or known potential hazards. Additionally, L & M Underground, Inc. subscribes to these principles:

1. All accidents are preventable through implementation of effective Safety and Health Control policies and programs.
2. Safety and Health controls are a major part of our work every day.
3. Accident prevention is good business. It minimizes human suffering, promotes better working conditions for everyone, holds L & M Underground, Inc. in higher regard with customers, and increases productivity. This is why L & M Underground, Inc. will comply with all safety and health regulations which apply to the course and scope of operations.
4. Management is responsible for providing the safest possible workplace for Employees. Consequently, management of L & M Underground, Inc. is committed to allocating and providing all of the resources needed to promote and effectively implement this safety policy.
5. Employees are responsible for following safe work practices, company rules, and for preventing accidents and injuries. Management will establish lines of communication to solicit and receive comments, information, suggestions, and assistance from employees where safety and health are concerned.
6. Management and supervisors of L & M Underground, Inc. will set an exemplary example with good attitudes and strong commitment to safety and health in the workplace. Toward this end, management must monitor the company's safety and health performance, working environment, and conditions to ensure that program objectives are achieved.
7. Our safety program applies to all employees and persons affected or associated in any way by the scope of this business. Everyone's goal must be to constantly improve safety awareness and to prevent accidents and injuries.

Everyone at L & M Underground, Inc. must be involved and committed to safety. This must be a team effort. Together, we can prevent accidents and injuries and keep each other safe and healthy in the work that provides our livelihood.

By signing this document, I confirm the receipt of L & M Underground, Inc.'s employee safety handbook. I have read and understood all policies, programs, and actions as described, and agree to comply with these set policies.

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Employee Signature

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Date